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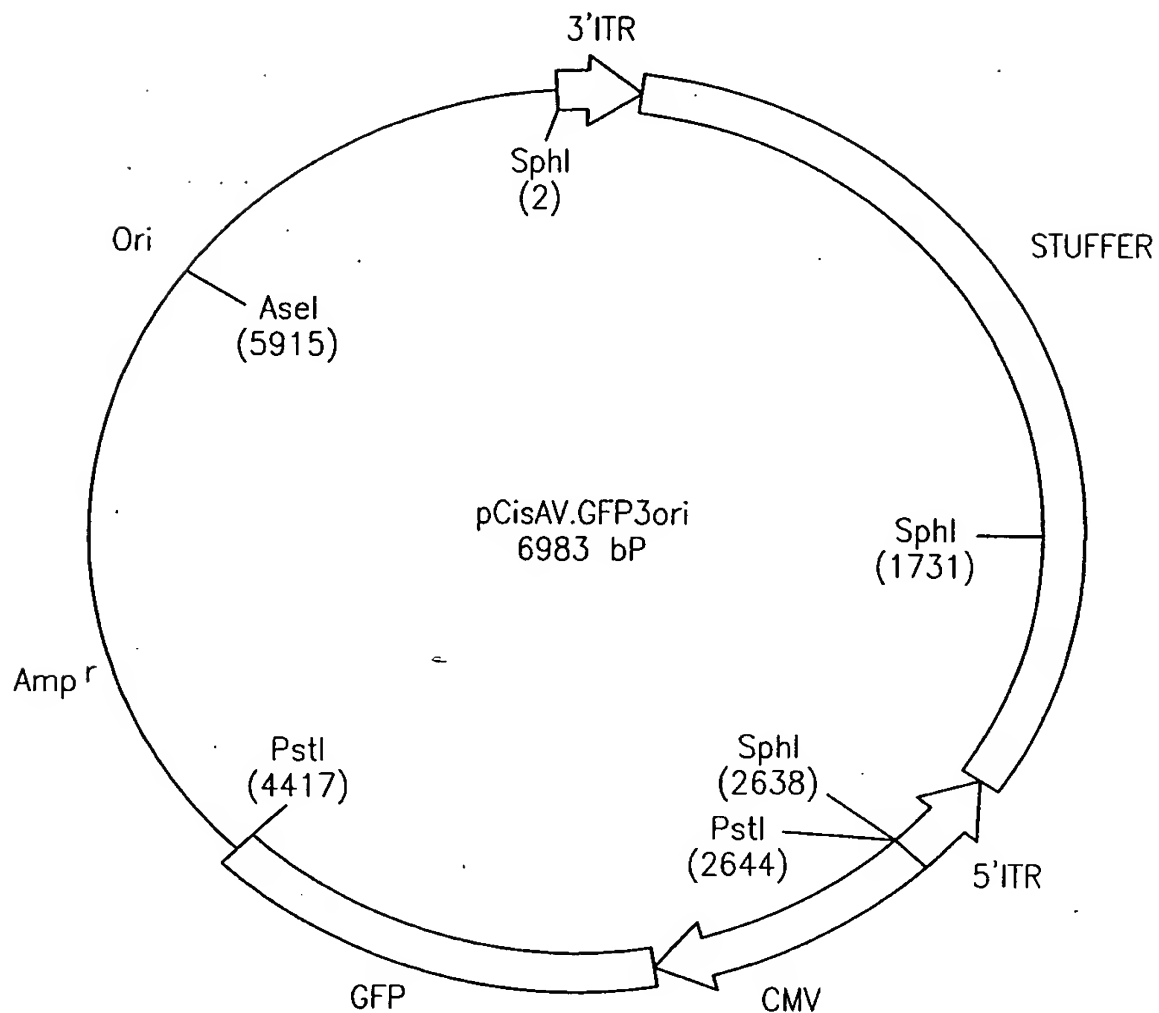


FIG. 1A

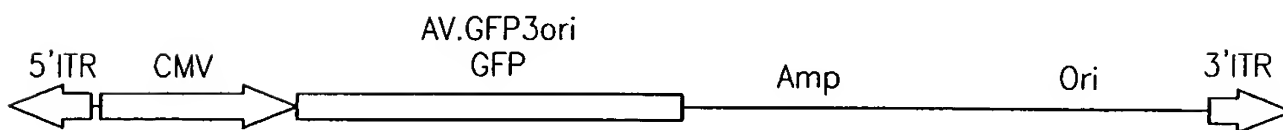


FIG. 1B

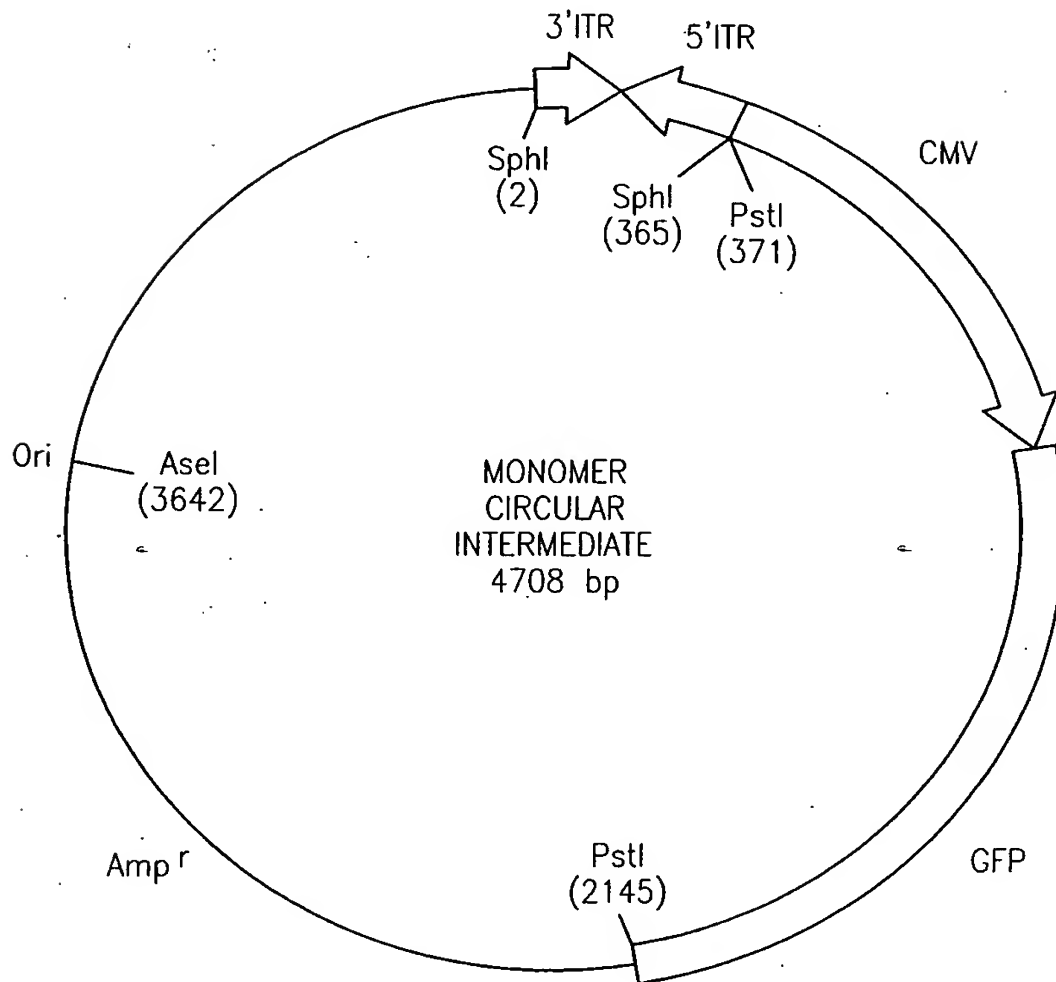


FIG. 1C

INFECT HELA CELLS AND MUSCLE WITH AV.GFP3ori

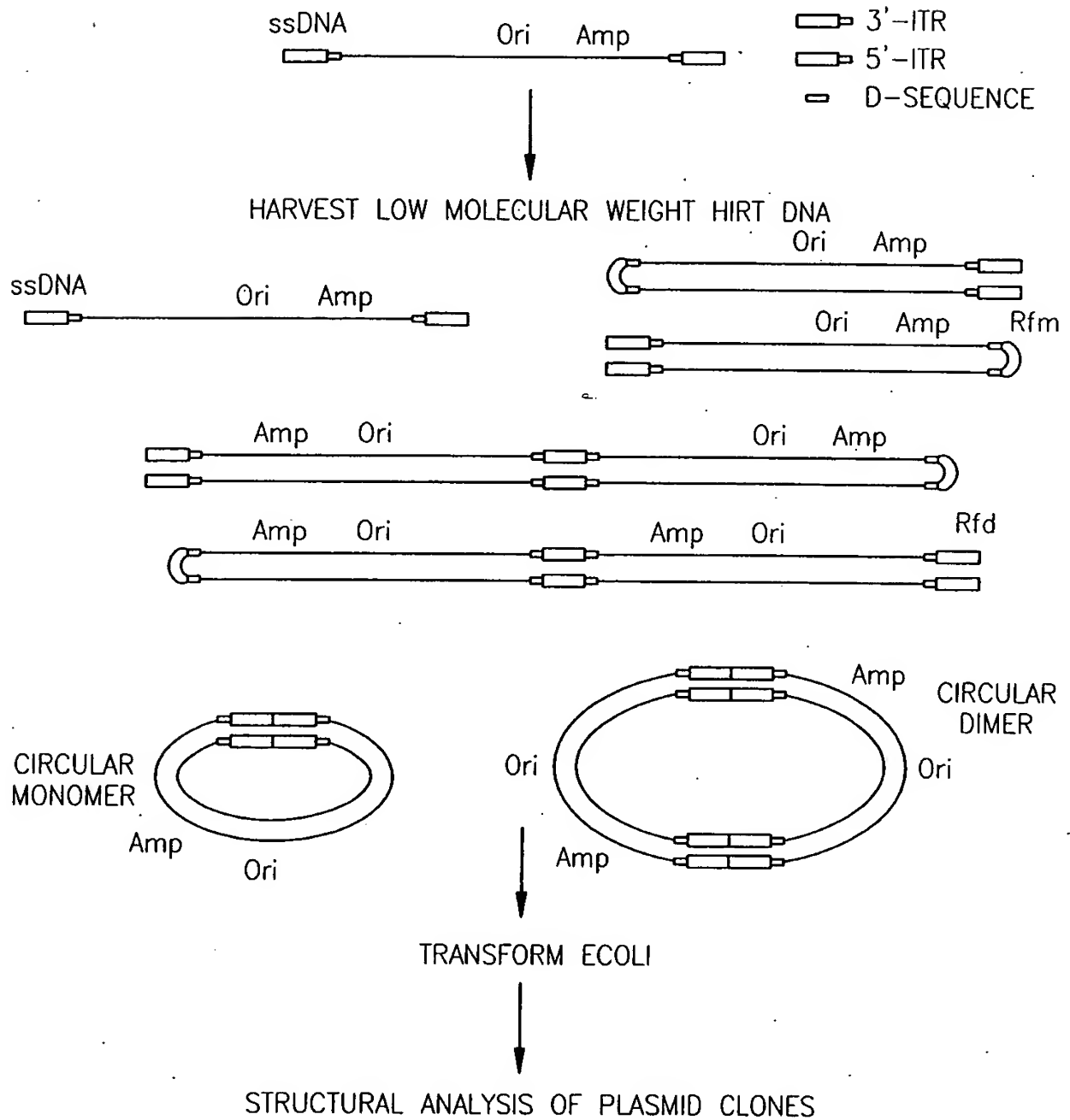


FIG. 1D

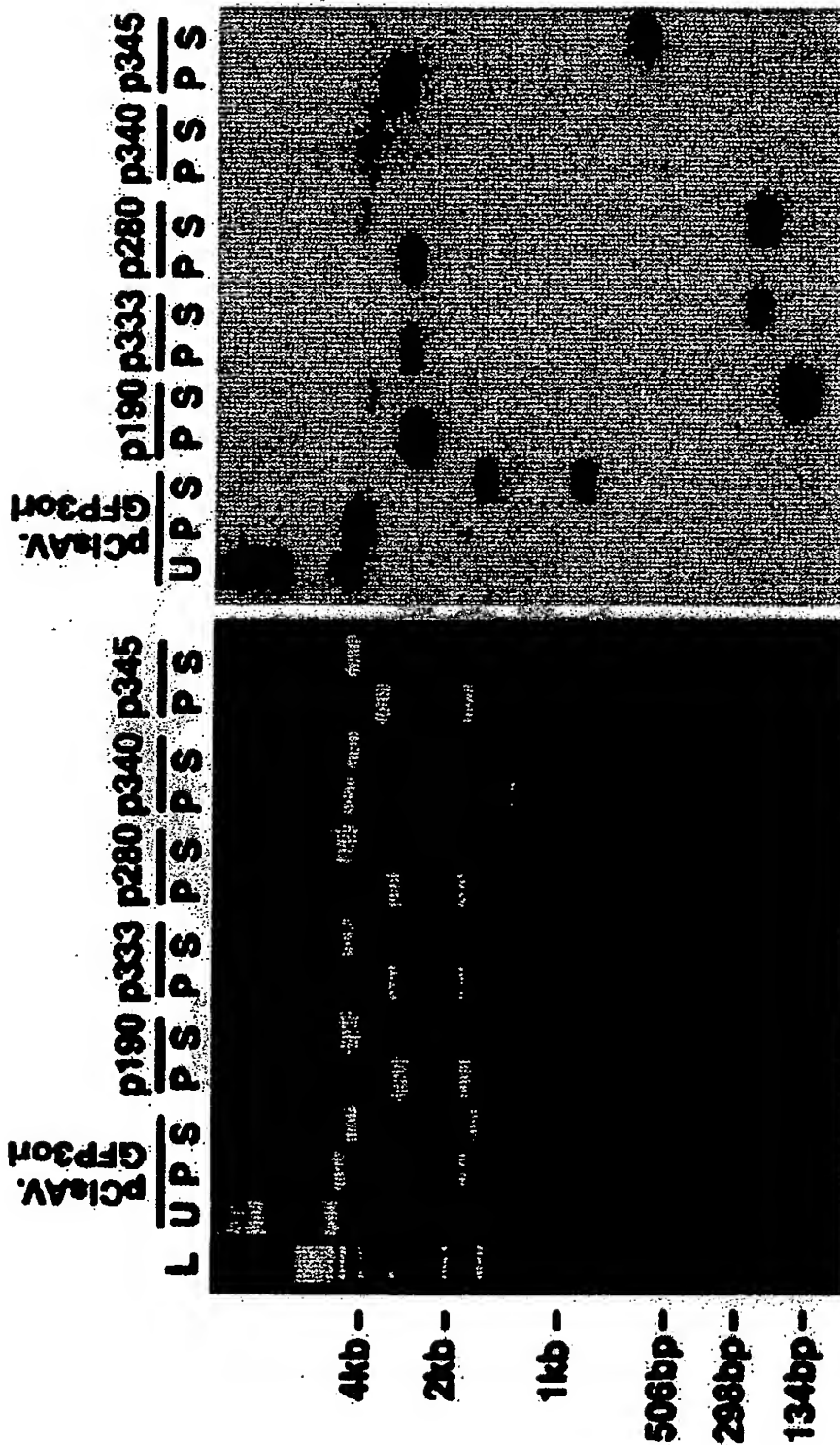


FIG. 2A

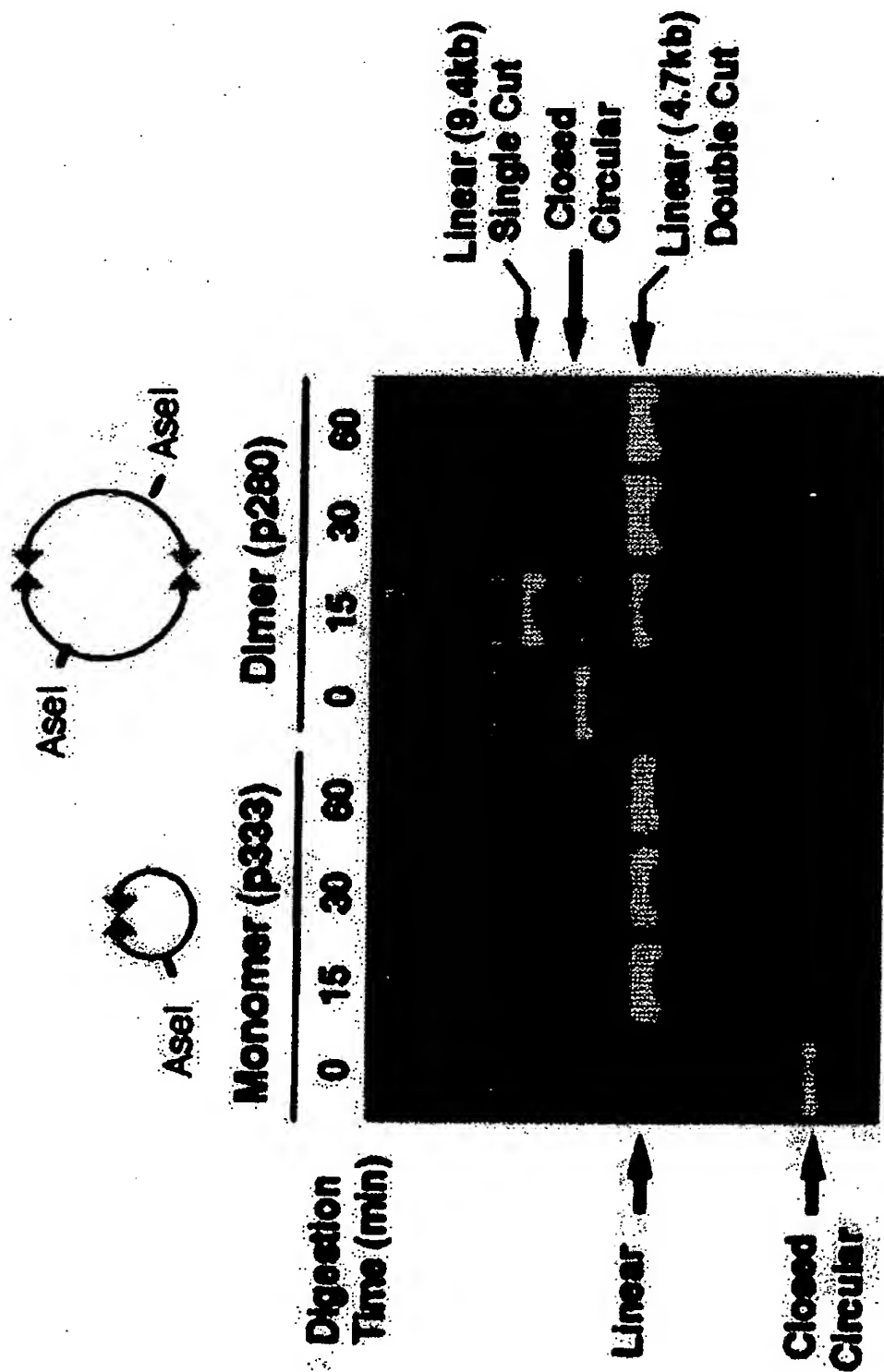


FIG. 2B

	10	20	30	40	50	60	70	80	90	100	110
5'<->3' ITR	CGGGGGTCGT	TGGGGGGTCA	GCCAGGCGGG	CCATTACCG	TAAATTATGT	AACGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC
p79	-----	-----	-----GGGGG	CCATTACCG	TAAATTATGT	99CGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC
p80	-----	-----	-----GG	CCATTACCG	TAAATTATGT	AACGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC
p81	-----	-----	-----GG	CCATTACCG	TAAATTATGT	99CGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC
p86	-----	-----	-----GG	CCATTACCG	TAAATTATGT	AACGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC
p87	-----	-----	-----GG	CCATTACCG	TAAATTATGT	AACGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC
p88	-----	-----	-----GG	CCATTACCG	TAAATTATGT	AACGACTGCA	GGCATGCAAG	CTCGAATTC	TCCGTAGATA	AGTAGCATGG	CGGGTTAATC

[illegible]

5'←→3' ITR	230	240	250	260	270	280	290	300	310	320	330
p79	GGCGGCTCA GTAGCGAGC GAGCGGCAG CTGGCGGTC GCTGGCTAC TGAGCGCC CGGCGAAGC CCGGGCTCG GCGACCTTT GATCGCCGG CCTCAGCGAG										
p80	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----
p81	-----	-----	-----	-----	-----	-----	-----	-----	-----	GCCCGG CCTCAGCGAG	Q
p86	-----	-----	-----	-----	-----	-----	-----	-----	-----	GCCCGG CCTCAGCGAG	+
p87	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----CGG CCTCAGCGAG	+
p88	-----	-----	-----	-----	-----	-----	-----	-----	-----	GCCCGG CCTCAGCGAG	

5' <-> 3' ITR

340	CGAGCGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	380	390	400	410	420	SphI	430	440
	CGAGCGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	TGTAGTTTAAT	GATTAACCGG	CCATGCTACT	TATCTACAGC	TTGCATGCGT		GTGAGCGAATA	
p79	----	CGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	GCGAGTTAAT	CCATGCTACT	TATCTACAGC	TTGCATGCGT		GTGAGCGAATA	
p80	CGAGCGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	TGTAGTTTAAT	GATTAACCGG	CCATGCTACT	TATCTACAGC	TTGCATGCGT		GTGAGCGAATA	
p81	CGAGCGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	TGTAGTTTAAT	GATTAACCGG	CCATGCTACT	TATCTACAGC	TTGCATGCGT		GTGAGCGAATA	
p86	CGAGCGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	TGTAGTTTAAT	GATTAACCGG	CCATGCTACT	TATCTACAGC	TTGCATGCGT		GTGAGCGAATA	
p87	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----		-----	
p88	CGAGCGAGCG	CGCAGAGAGG	GAGTGGGCCAA	CTCCATCACT	AGGGGTTCCT	GCGAGTTAAT	GATTAACCGG	CCATGCTACT	TATCTACAGC	TTGCATGCGT		GTGAGCGAATA	

	450	460	470	480	490	500	505
3' <-> 3' ITR	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGCTTGC	TGGCGTTTT	CCATAGGCTC	CGCCC
p79	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGCGTTG-	-----	-----	-----
p80	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGCGTTG-	-----	-----	-----
p81	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGCGTTG-	-----	-----	-----
p86	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGC-----	-----	-----	-----
p87	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGCGTTG-	-----	-----	-----
p88	GGCCAGCMAA	AGGCCAGGAA	CCGTAAAAAG	CCCGCGTTG-	-----	-----	-----

FIG. 2C

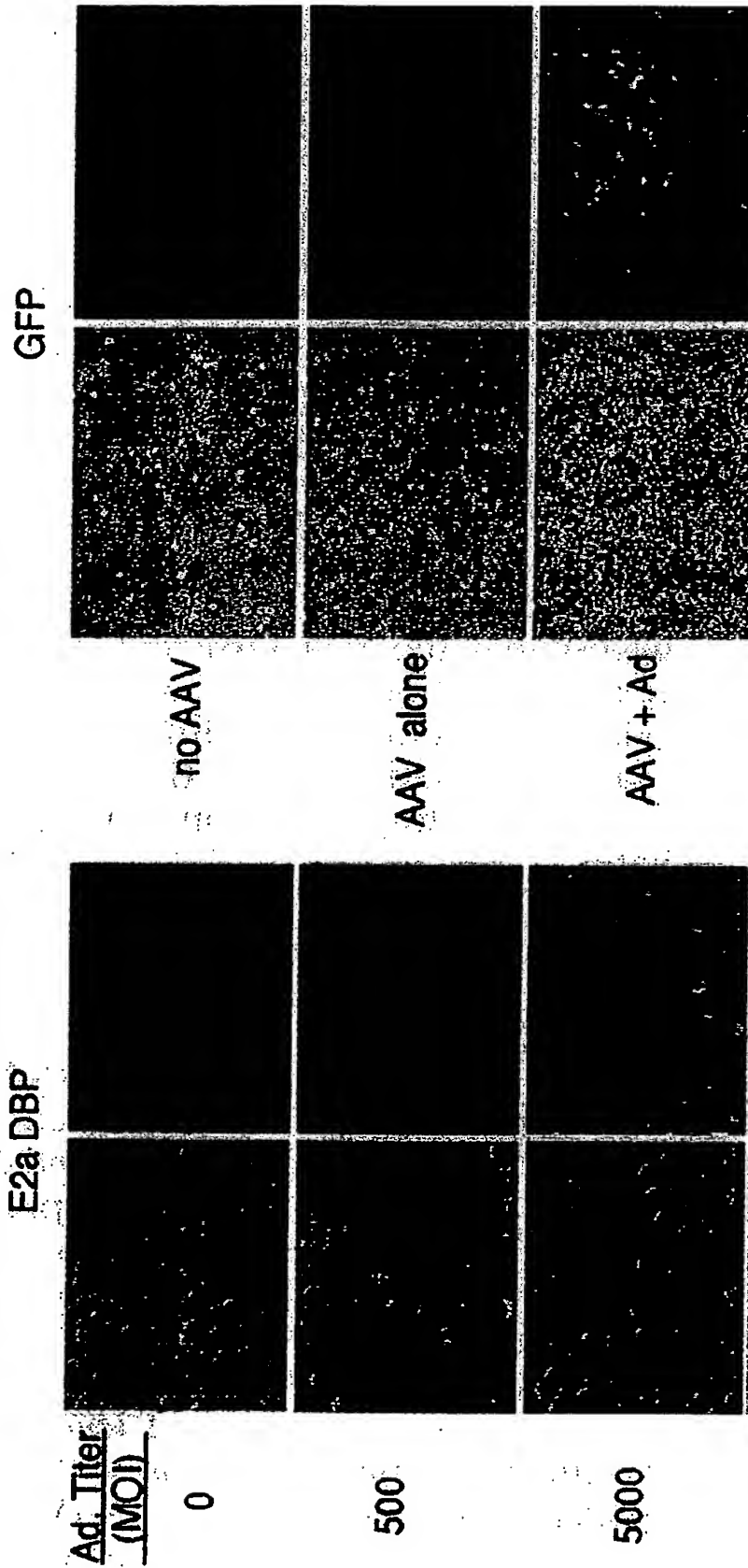


FIG. 3A

FIG. 3B

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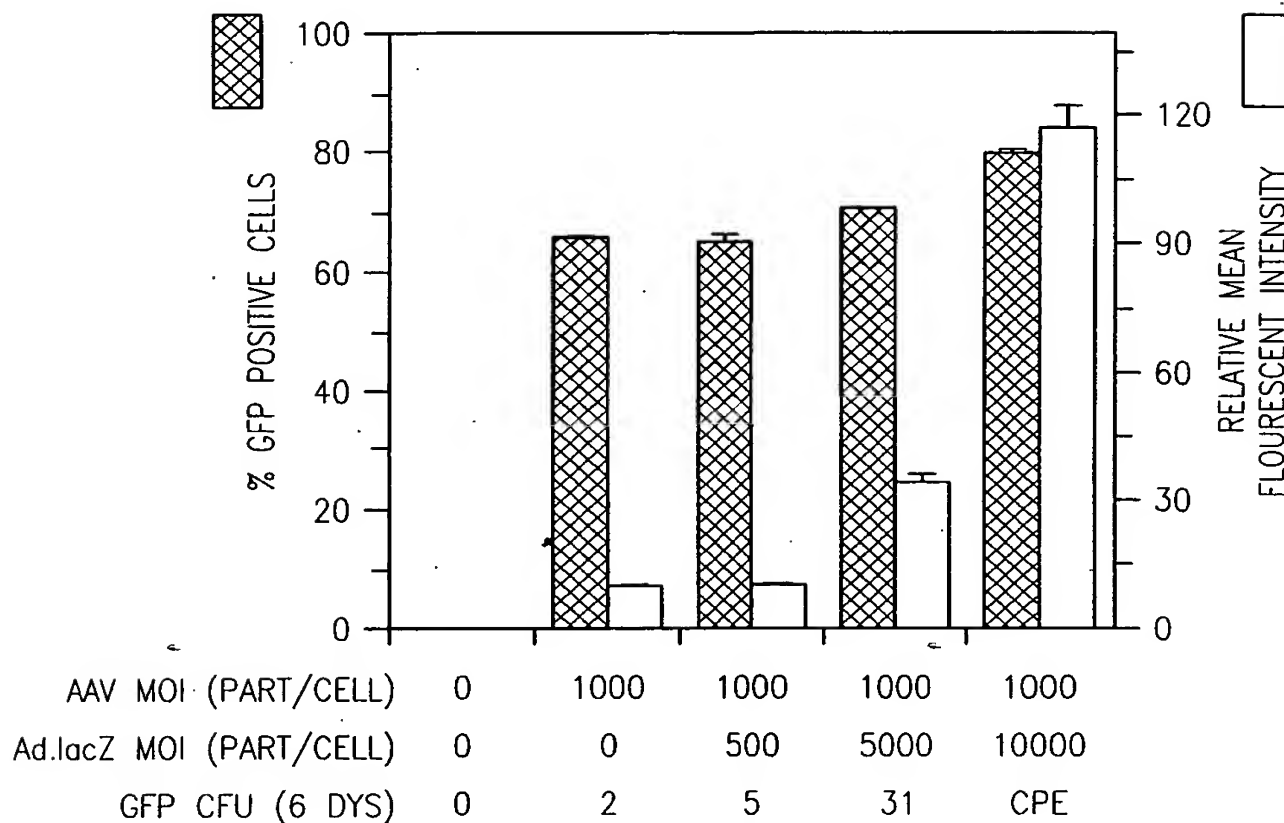


FIG. 3C

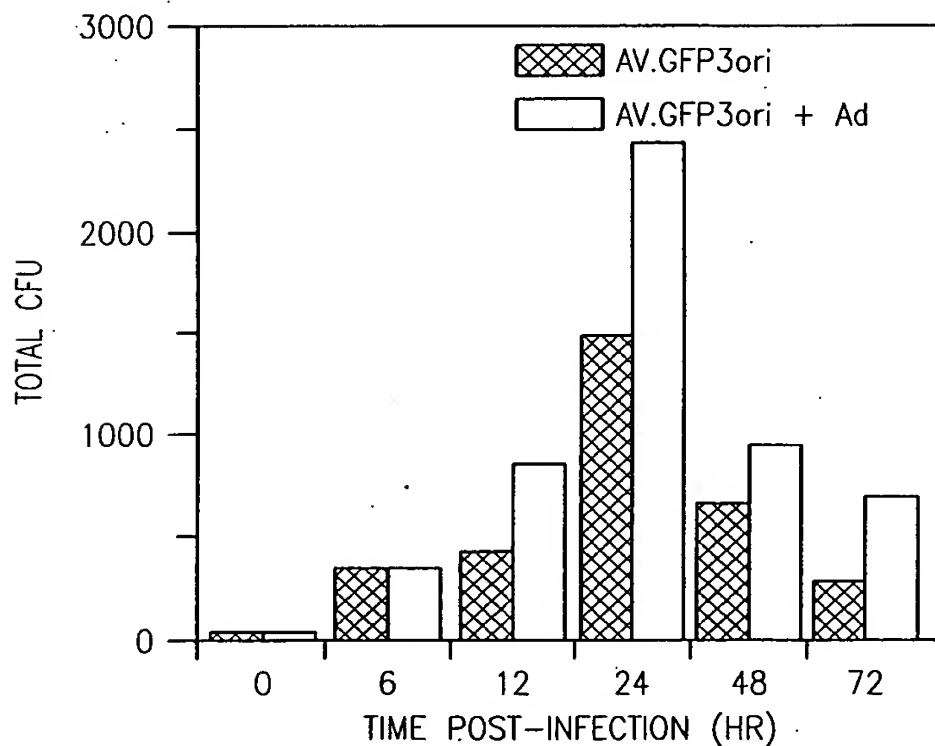


FIG. 3D

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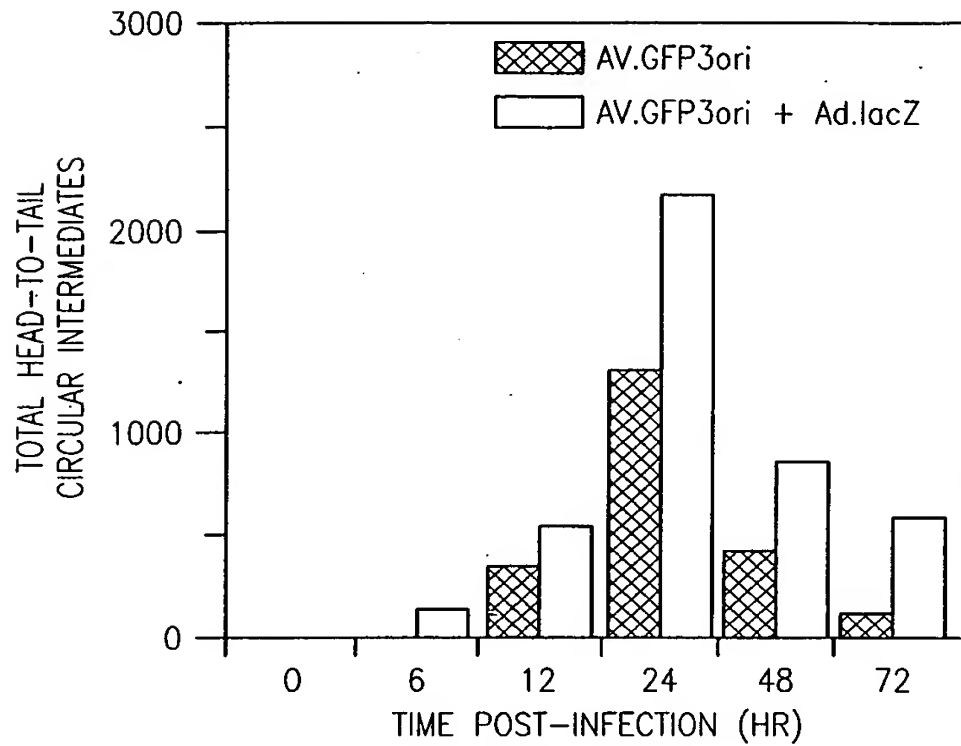


FIG. 3E

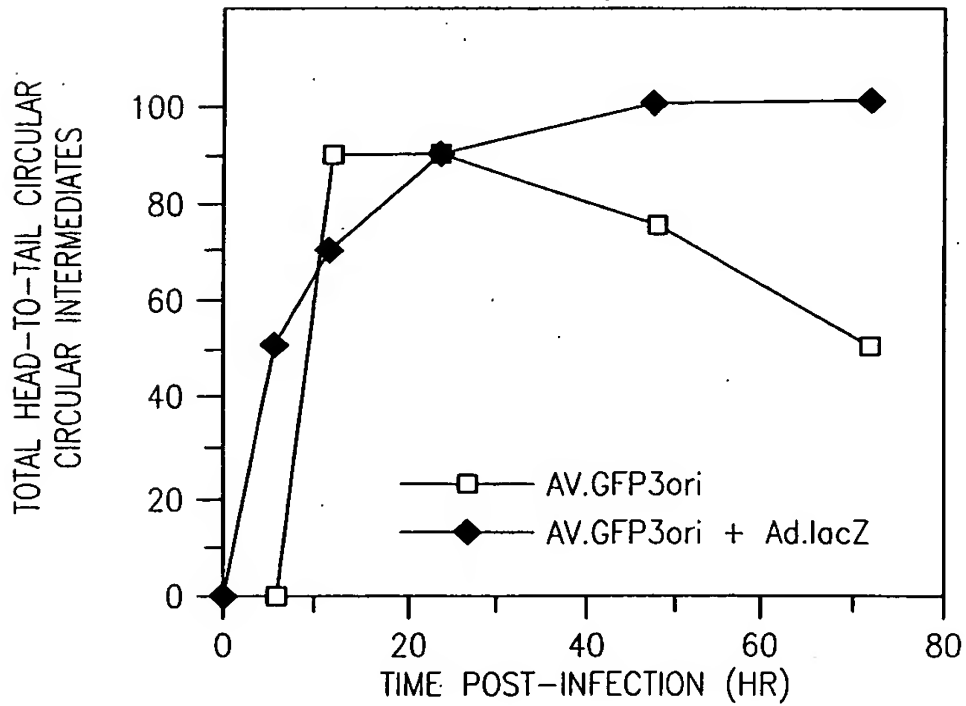


FIG. 3F

TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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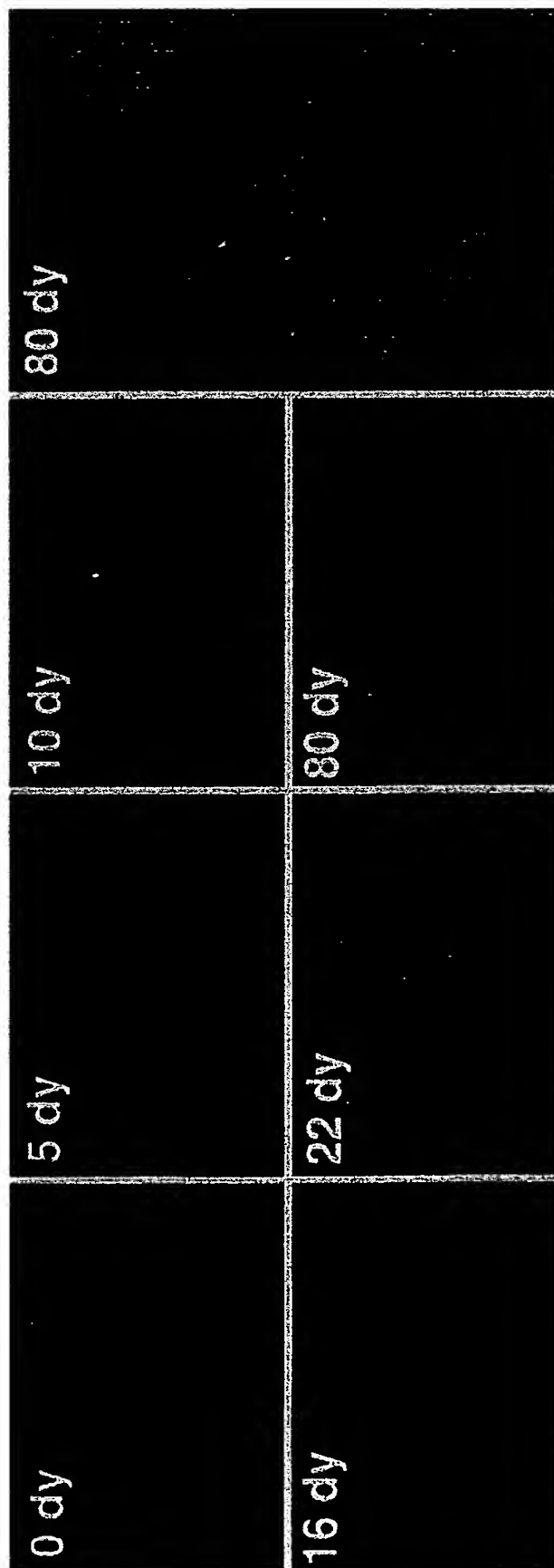


FIG. 4A

202510-59945007

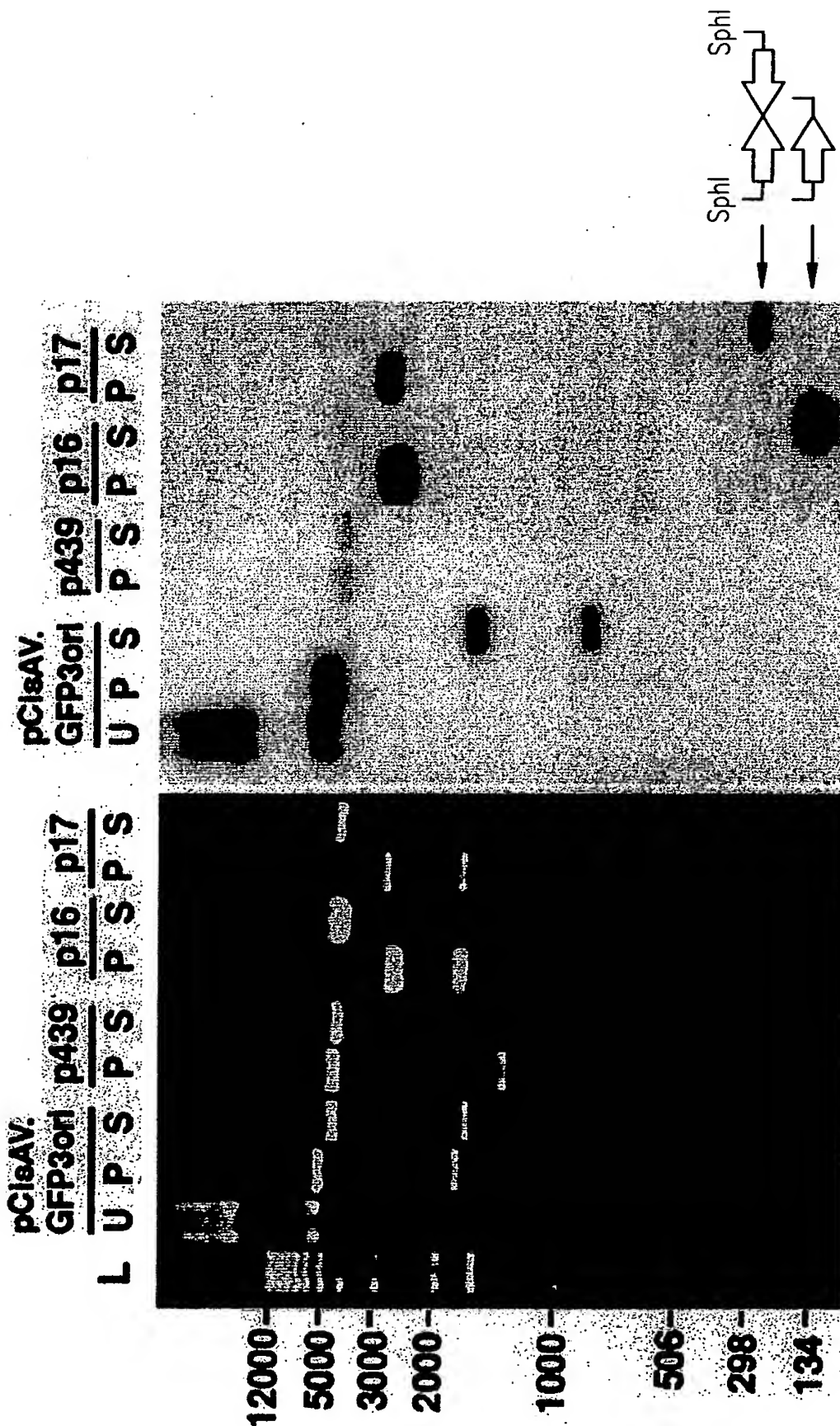


FIG. 4B

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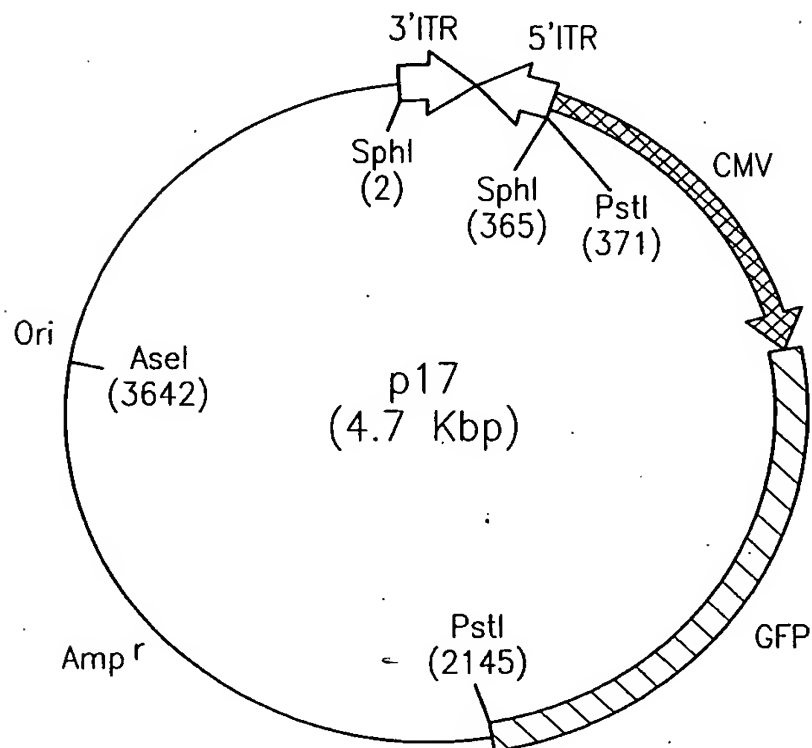


FIG. 4C

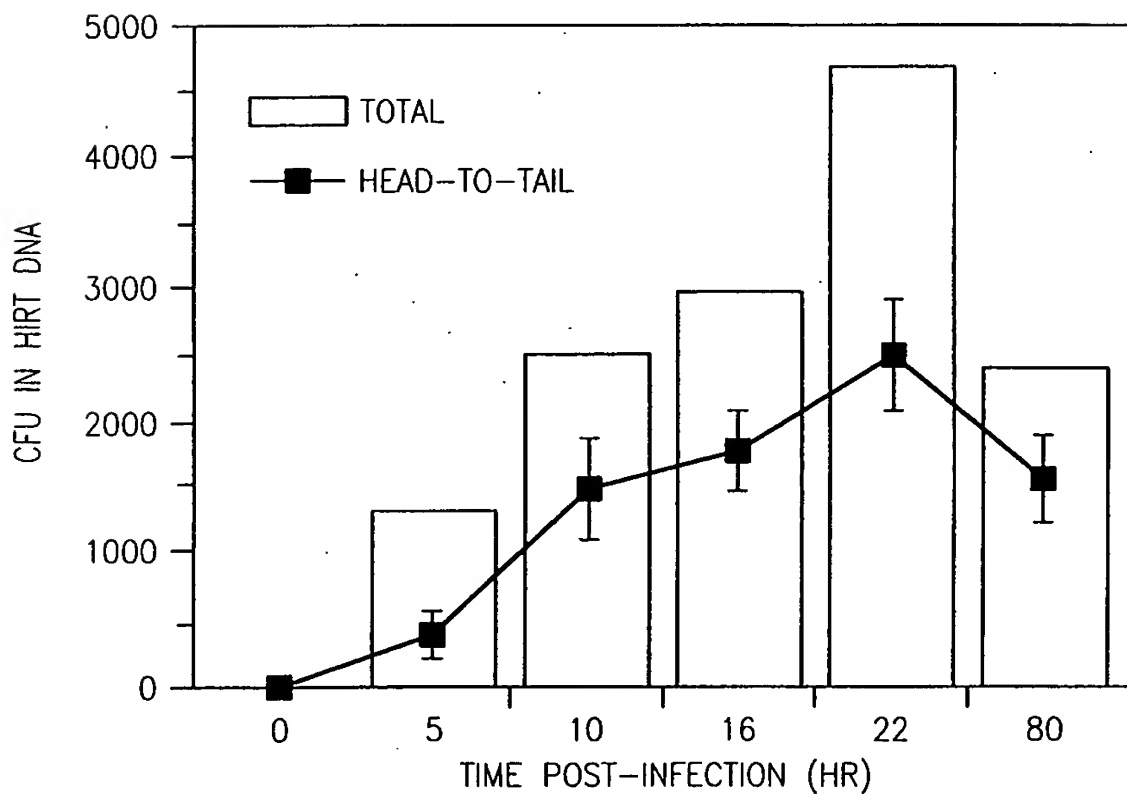


FIG. 5A

20251019991500F

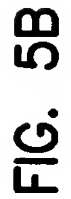


FIG. 5B

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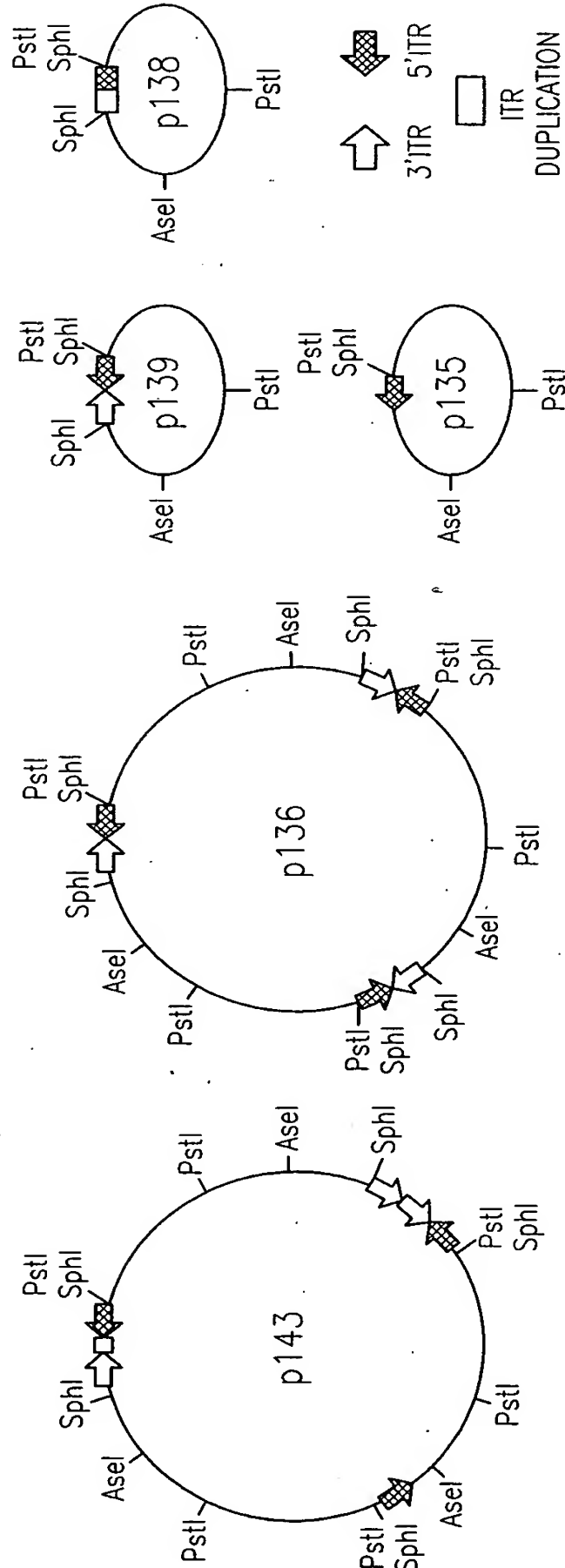


FIG. 5C

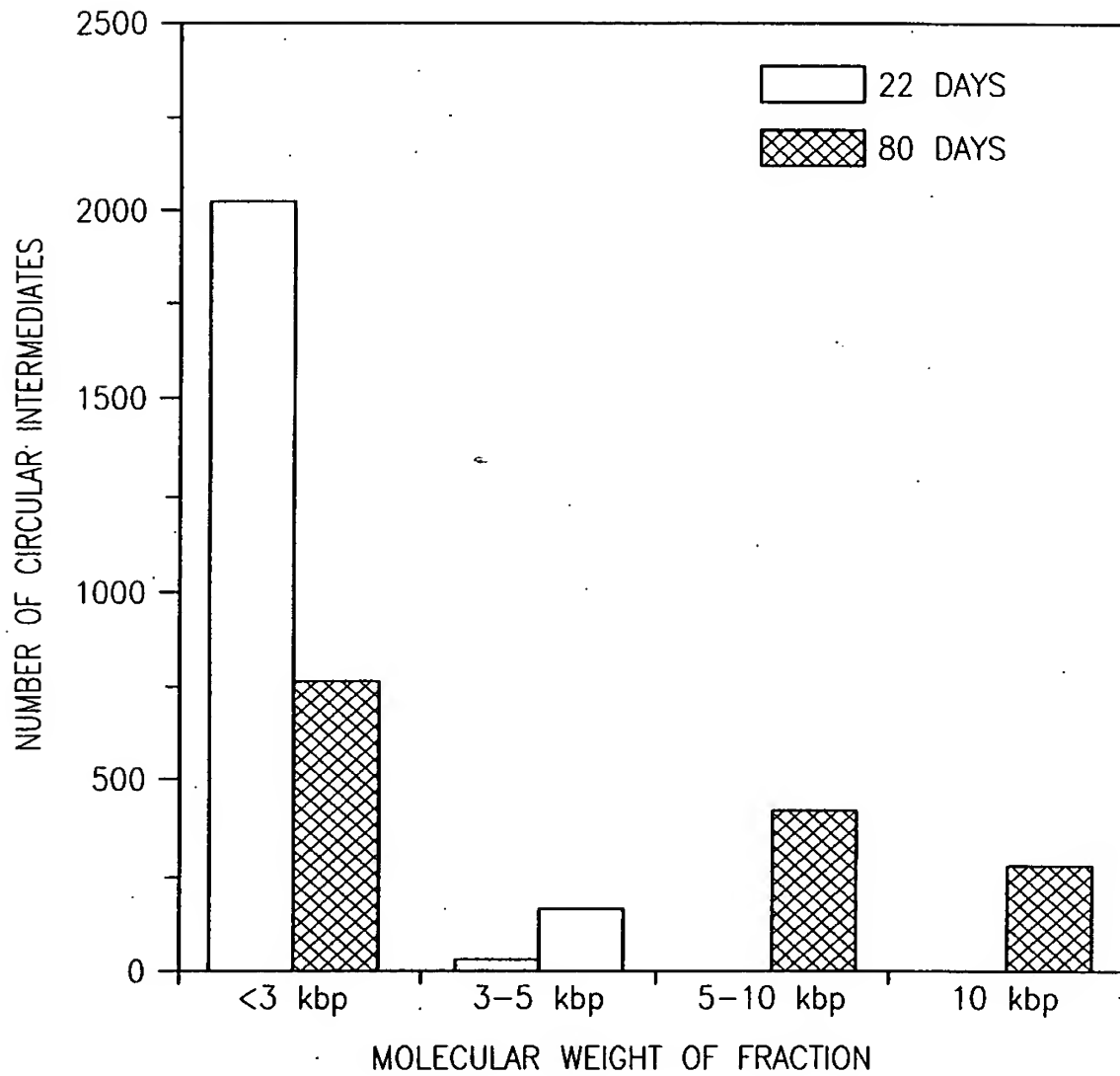
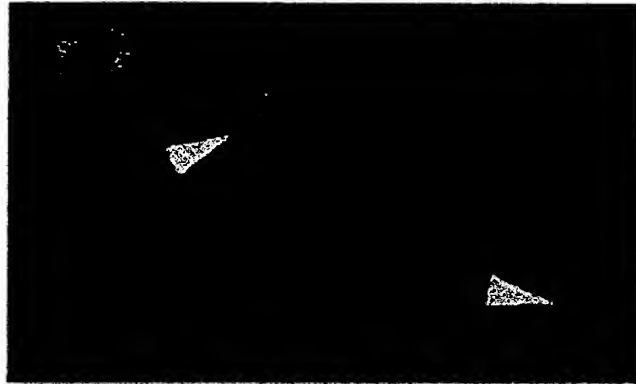


FIG. 6

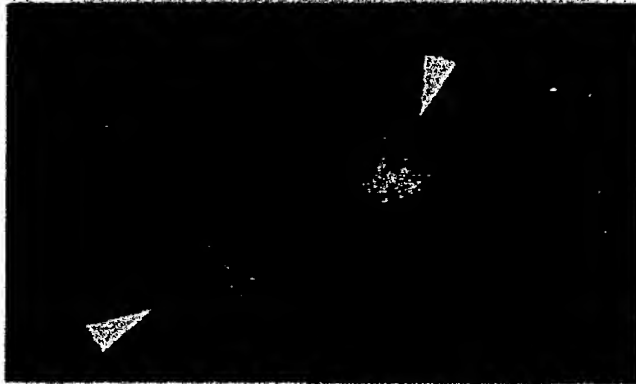
TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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p81



p87



pCMVGFP

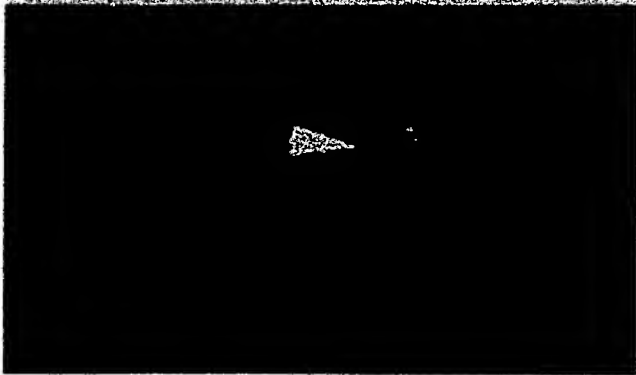


FIG. 7A

202370" 59945007

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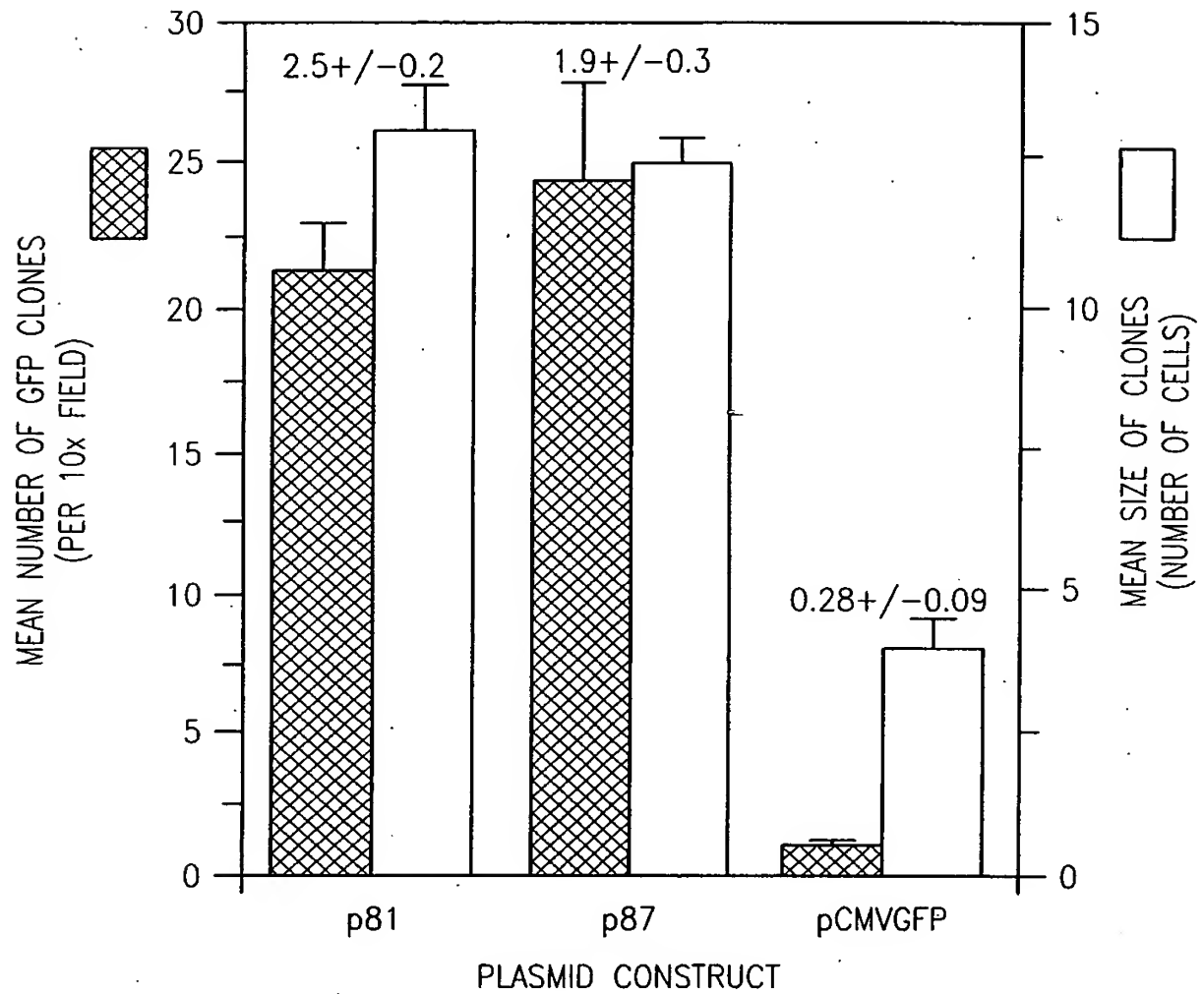


FIG. 7B

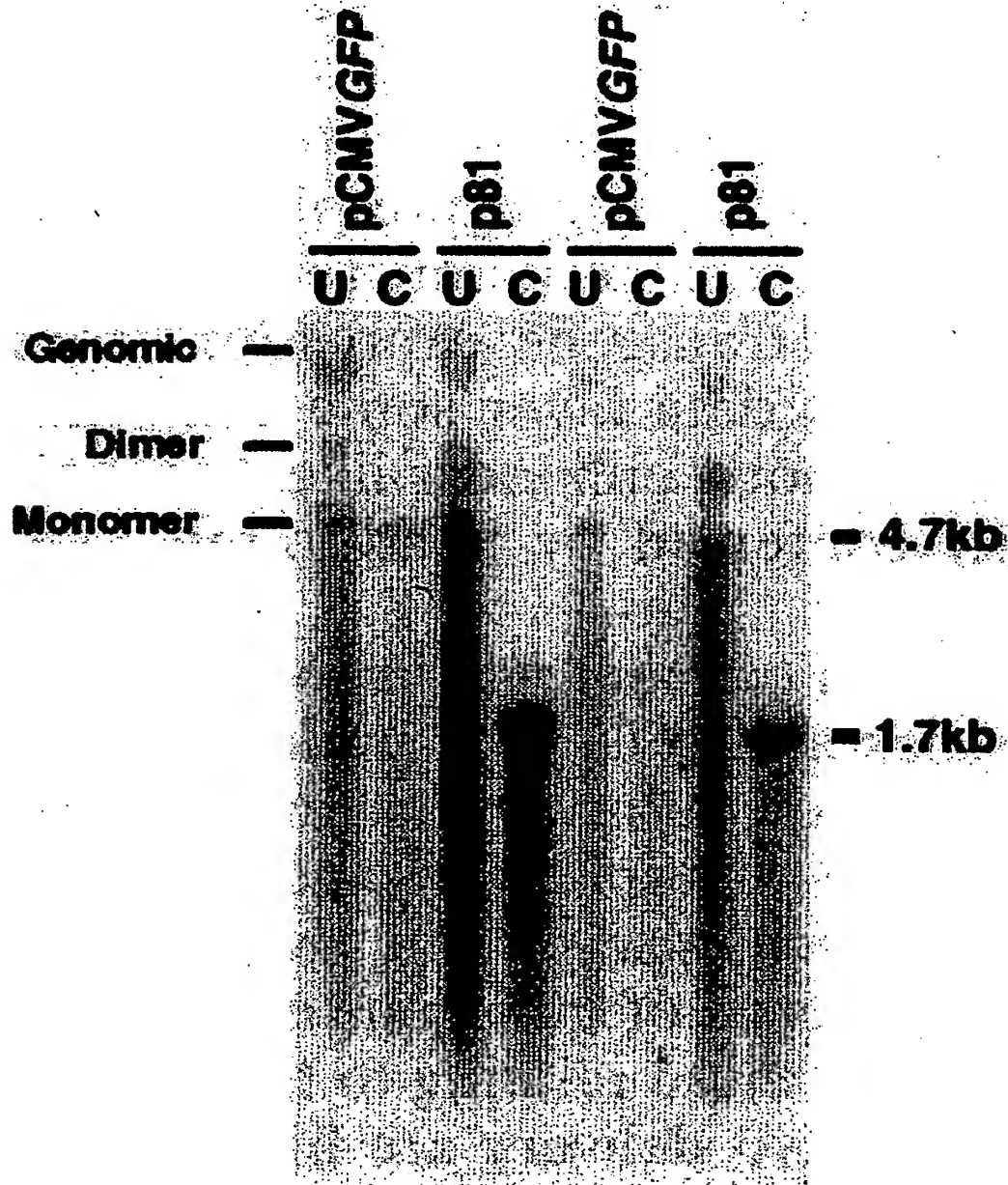


FIG. 7C

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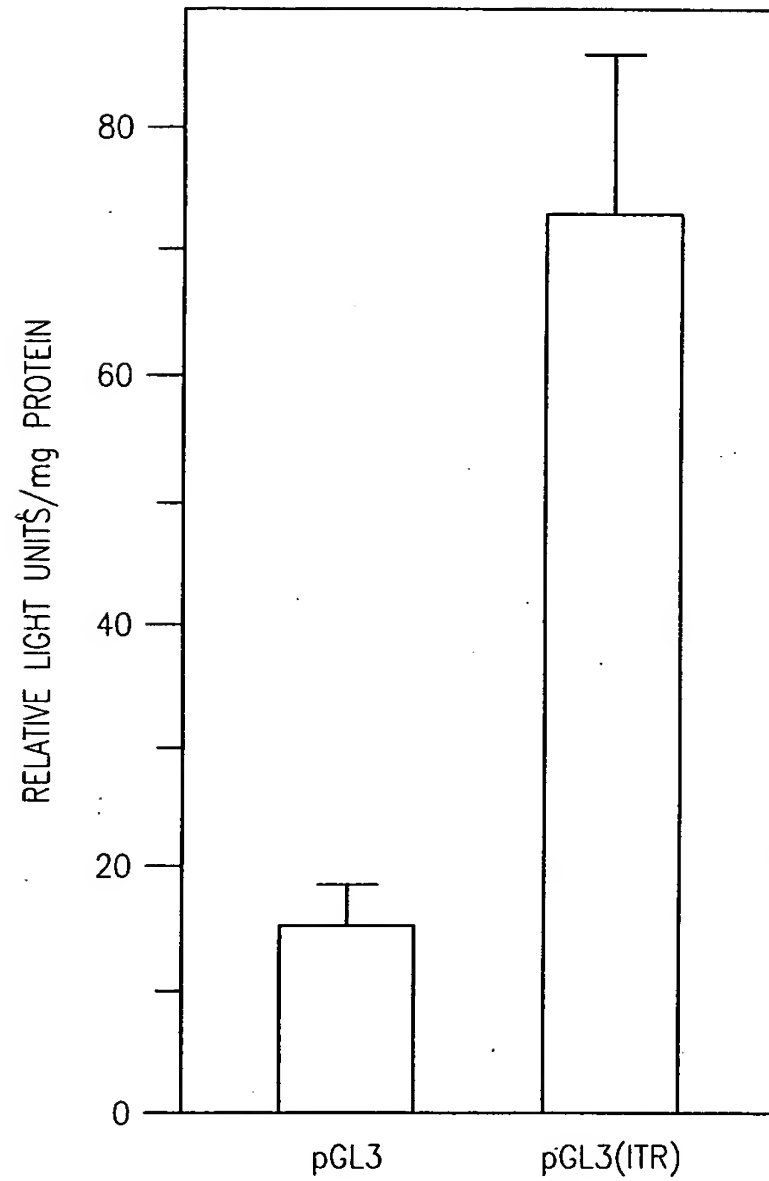


FIG. 7D

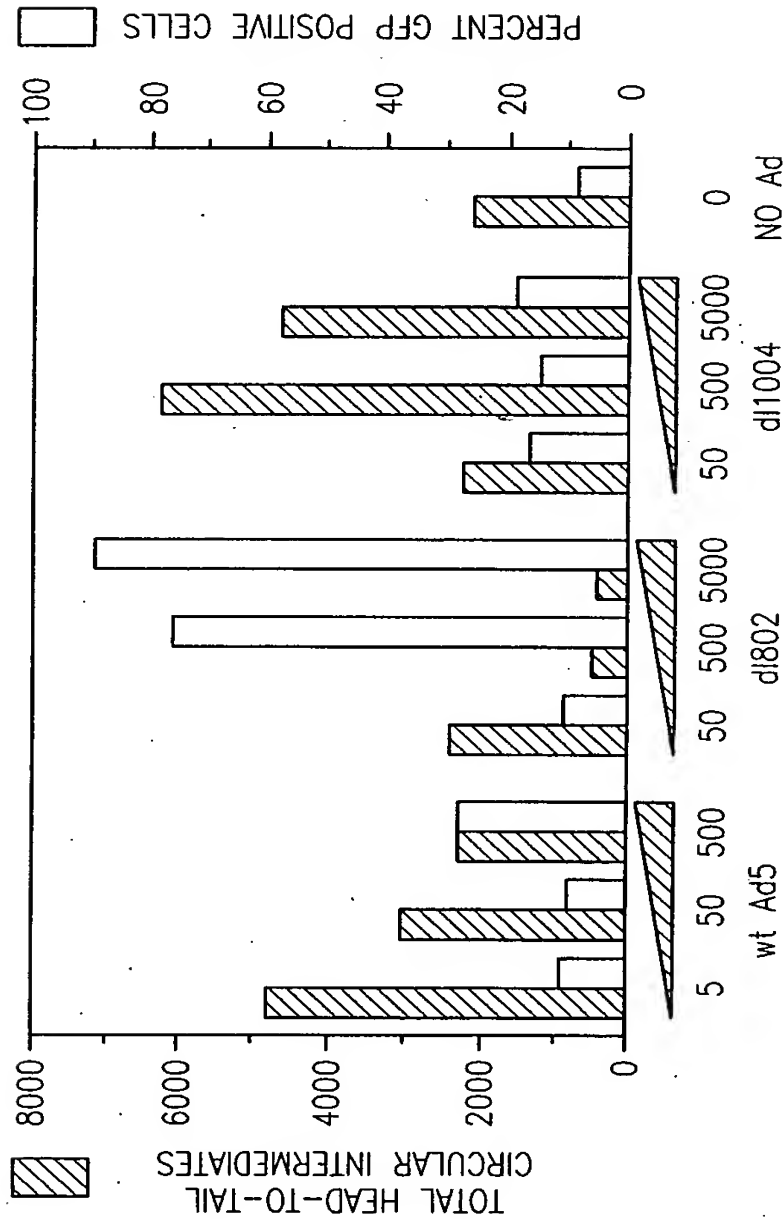


FIG. 8A

TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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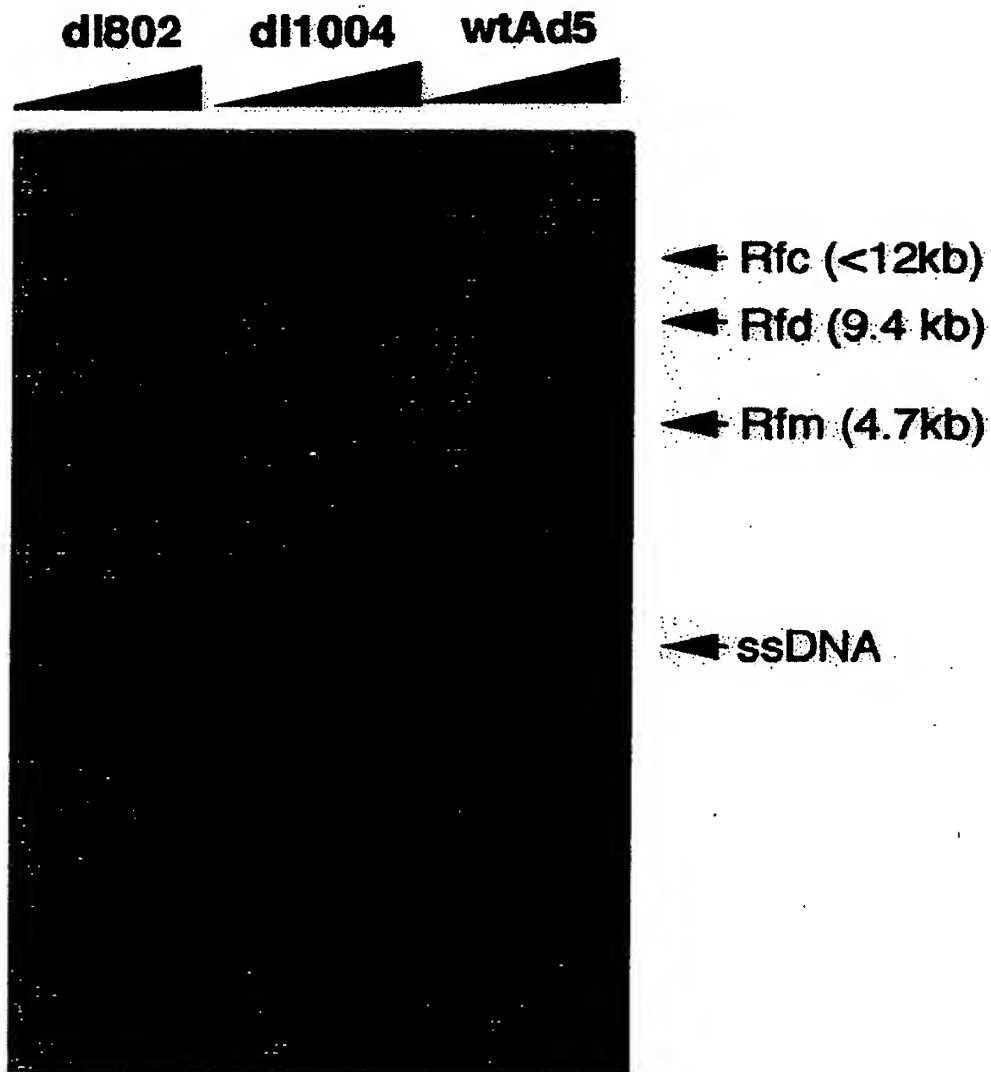


FIG. 8B

202270" 33445007

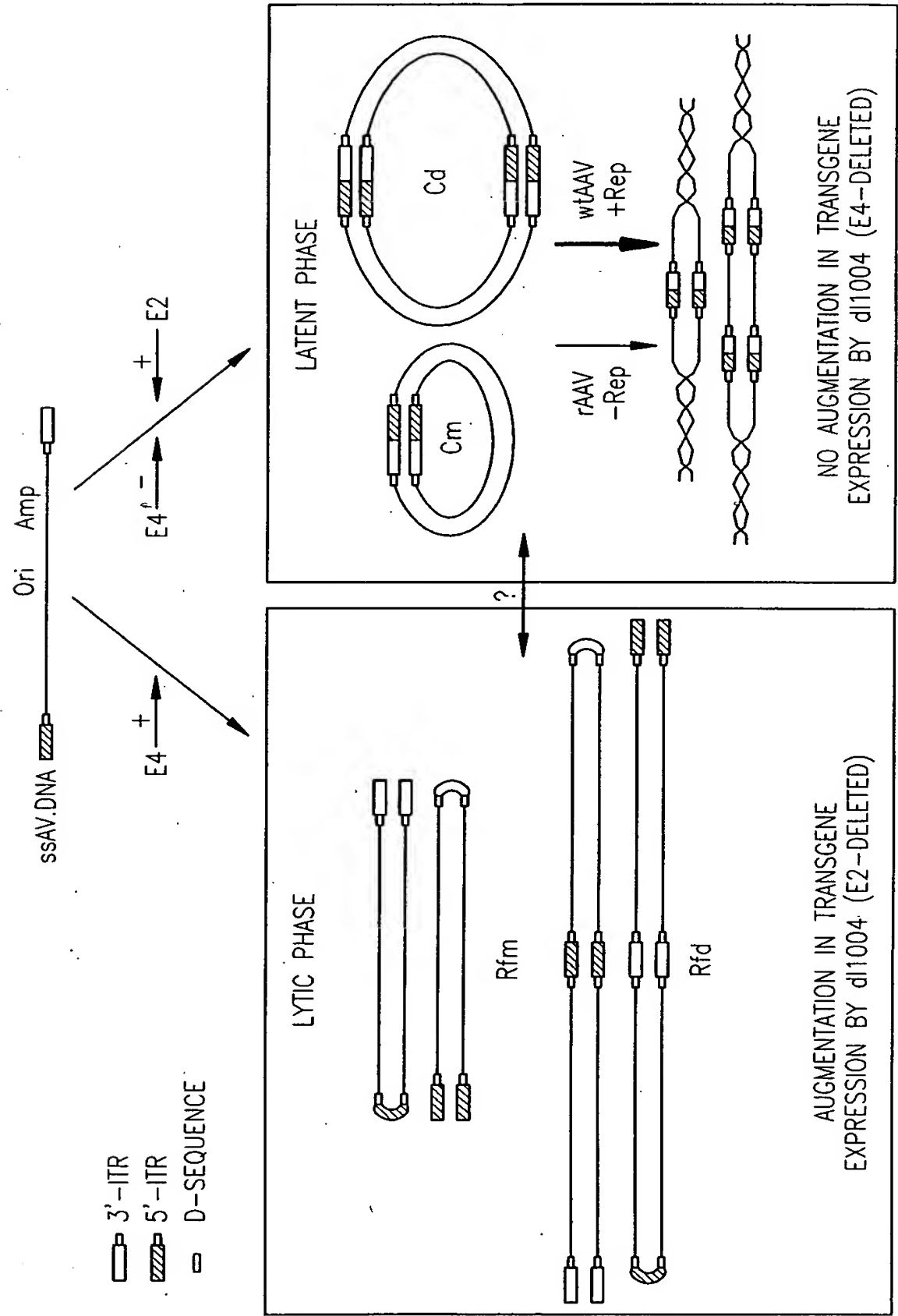


FIG. 9

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10 20 30 40 50 60
 GCATGCAAGC TGTAGATAAG TAGCATGGCG GGTTAATCAT TAACTACAAG GAACCCCTAG
 CGTACGTTTC ACATCTATTTC ATCGTACCGC CCAATTAGTA ATTGATGTTC CTTGGGGATC

70 80 90 100 110 120
 TGATGGAGTT GGCCACTCCC TCTCTGCGCG CTCGCTCGCT CACTGAGGCC GGGCGGCCAA
 ACTACCTCAA CCGGTGAGGG AGAGACGCGC GAGCGAGCGA GTGACTCCGG CCCGCCGGTT

130 140 150 160 170 180
 AGGTCGCCCC ACGCCCGGGC TTTGCCCGGG CGGCCTCAGT GAGCGAGCGA GCGCGCAGAG
 TCCAGCGGGC TCGGGGCCCG AAACGGGGCC GCCGGAGTCA CTCGCTCGCT CGCGCGTCTC

190 200 210 220 230 240
 AGGGAGTGGC CAACTCCATC ACTAGGGGTT CCTTGTAGTT AATGATTAAAC CCGCCATGCT
 TCCCTACCCG GTTGAGGTAG TGATCCCCAA GGAACATCAA TTACTAATTG GGCGGTACGA

250 260 270 280
 ACTTATCTAC CGATGAATTC GAGCTTGCAT GC.....
 TGAATAGATG GCTACTTAAG CTCGAACGTA CG.....

FIG. 10A

10 20 30 40 50 60
 GCATGCAAGC TGTAGATAAG TAGCATGGCG GGTTAATCAT TAACTACAAG GAACCCCTAG
 CGTACGTTTC ACATCTATTTC ATCGTACCGC CCAATTAGTA ATTGATGTTC CTTGGGGATC

70 80 90 100 110 120
 TGATGGAGTT GGCCACTCCC TCTCTGCGCG CTCGCTCGCT CACTGAGGCC GGGCGCGCGC
 ACTACCTCAA CCGGTGAGGG AGAGACGCGC GAGCGAGCGA GTGACTCCGG CCCGCCGGCG

130 140 150 160 170 180
 TCGCTCGCTC ACTGAGGCCG GCGGACCAAA GGTCGCCCCGA GCCCGGGGCTT TGCCCGGGCG
 AGCGAGCGAG TGAATCCGGC CCGCTGGTTT CCAGCGGGCT CGGGCCCGAA ACGGGCCCGC

190 200 210 220 230 240
 GCCTCAGTGA GCGAGCGCGC GCGCAGAGAG GGAGTGGCCA ACTCCATCAC TAGGGGTTCC
 CGGAGTCACT CGCTCGCGCG CGCGTCTCTC CCTCACC GTGAGGTAGTG ATCCCCAAGG

250 260 270 280 290 300
 TTGTAGTTAA TGATTAACCC GCCATGCTAC TTATCTACCG ATGAATTGCA GCTTGCATGC
 AACATCAATT ACTAATTGGG CCGTACGATG AATAGATGGC TACTTAAGCT CGAACGTACG

FIG. 10B

2025-04-23

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10 20 30 40 50 60
GCATGCAAGC TGTAGATAAG TAGCATGGCG GGTTAATCAT TAACTACAAG GAACCCCTAG
CGTACGTTTC ACATCTATTC ATCGTACCGC CCAATTAGTA ATTGATGTTC CTTGGGGATC

70 80 90 100 110 120
TGATGGAGTT GGCCACTCCC TCTCTGCGCG CTCGCTCGCT CACTGAGGCC GGGCGACCAA
ACTACCTCAA CCGGTGAGGG AGAGACGCGC GAGCGAGCGA GTGACTCCGG CCGCTGGTT

130 140 150 160 170 180
AGGTCGCCCC ACGCCCGGGC TTTGGTCCGC CGGCCTCAGT GAGCGAGCGA GCGCGCAGAG
TCCAGCGGGC TCGGGGCCCG AAACCAGCGG GCCGGAGTCA CTCGCTCGCT CGCGCGTCTC

190 200 210 220 230 240
AGGGAGTGGC CAACTCCATC ACTAGGGGTT CTTGTAGTT AATGATTAA CCGCCATGCT
TCCCTCACC GGTGAGGTAG TGATCCCCAA GGAACATCAA TTACTAATTG GCGGGTACGA

250 260 270 280
ACTTATCTAC CGATGAATTC GAGCTTGCAT GC.....
TGAATAGATG GCTACTTAAG CTCGAACGTA CG.....

FIG. 10C

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		10	20	30	40	50	
P81	1	GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAAGTACAAG	50
p79	1	GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAAGTACAAG	50
p1202	1	GCATGCAAGC	TGTAGATAAG	TAGCATGGCG	GGTTAATCAT	TAAGTACAAG	50
		60	70	80	90	100	
P81	51	GAACCCCTAG	TGATGGAGTT	GGCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	100
p79	51	GAACCCCTAG	TGATGGAGTT	GGCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	100
p1202	51	GAACCCCTAG	TGATGGAGTT	GGCCACTCCC	TCTCTGCGCG	CTCGCTCGCT	100
		110	120	130	140	150	
P81	101	CACTGAGGCC	GGGCG-----	-----	-----	---GCCAAAG	150
p79	101	CACTGAGGCC	GGGCGCGCGC	TCGCTCGCTC	ACTGAGGCCG	GGCGaCcaAa	150
p1202	101	CACTGAGGCC	GGGCG-----	-----	-----	---ACCAAAG	150
		160	170	180	190	200	
P81	151	GTCGCCCGAC	GCCCGGGCTT	TGCCCCGGCG	GCCTCAGTGA	GCGAGCGAGC	200
p79	151	GgtcgCCcga	GCCCGGGCTT	TGCCCCGGCG	GCCTCAGTGA	GCGAGCGcGC	200
p1202	151	GTCGCCCGAC	GCCCGGGCTT	TGgtCGccCG	GCCTCAGTGA	GCGAGCGAGC	200
		210	220	230	240	250	
P81	201	GCGCAGAGAG	GGAGTGGCCA	ACTCCATCAC	TAGGGGTTCC	TTGTAGTTAA	250
p79	201	GCGCAGAGAG	GGAGTGGCCA	ACTCCATCAC	TAGGGGTTCC	TTGTAGTTAA	250
p1202	201	GCGCAGAGAG	GGAGTGGCCA	ACTCCATCAC	TAGGGGTTCC	TTGTAGTTAA	250
		260	270	280	290	300	
P81	251	TGATTAAACC	GCCATGCTAC	TTATCTACCG	ATGAATTGGA	GCTTGCAATGC	300
p79	251	TGATTAAACC	GCCATGCTAC	TTATCTACCG	ATGAATTGGA	GCTTGCAATGC	300
p1202	251	TGATTAAACC	GCCATGCTAC	TTATCTACCG	ATGAATTGGA	GCTTGCAATGC	300

FIG. 11

2025-09-24 10:23:00

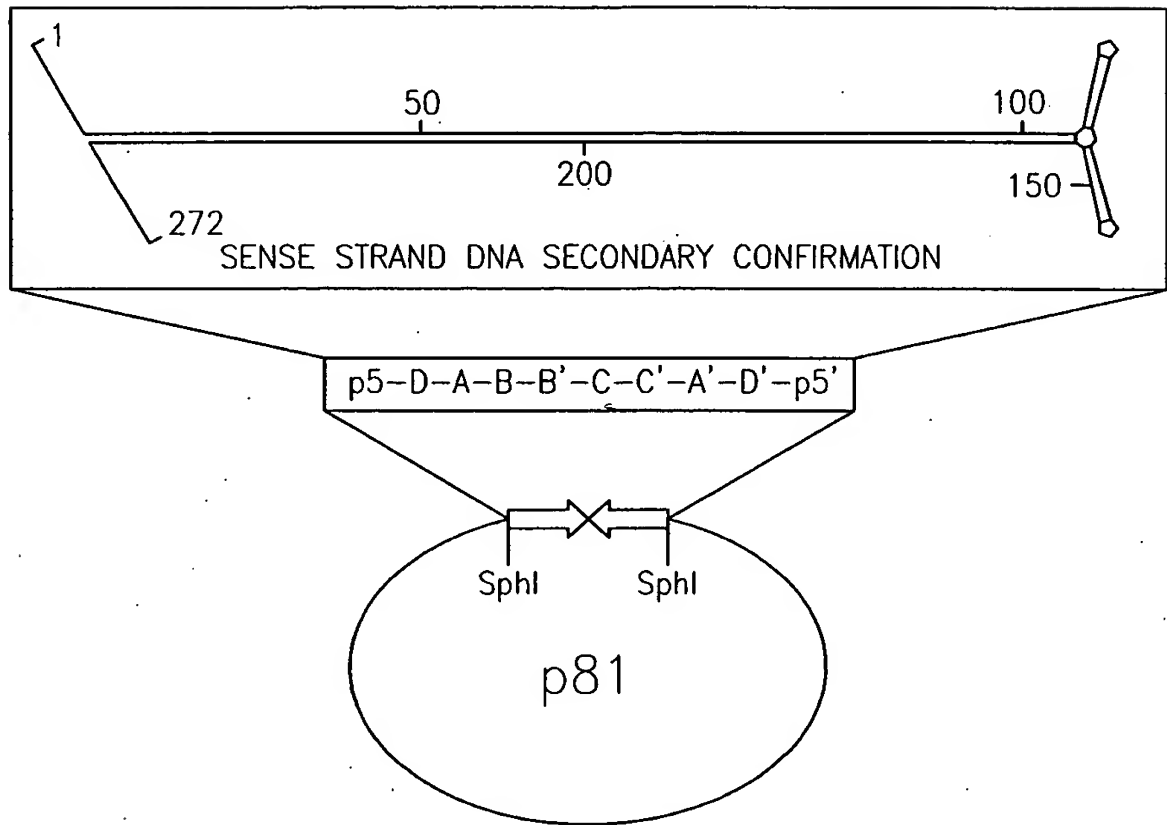


FIG. 12A

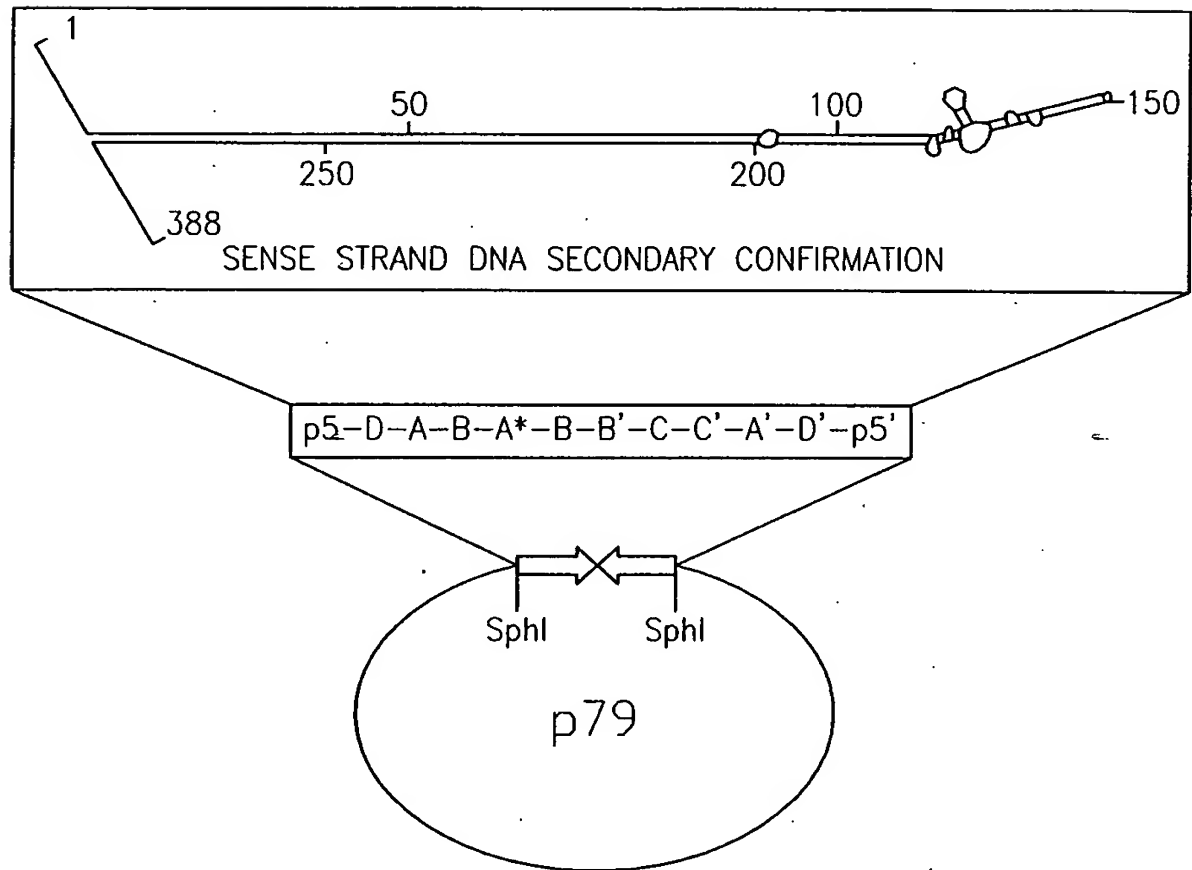


FIG. 12B

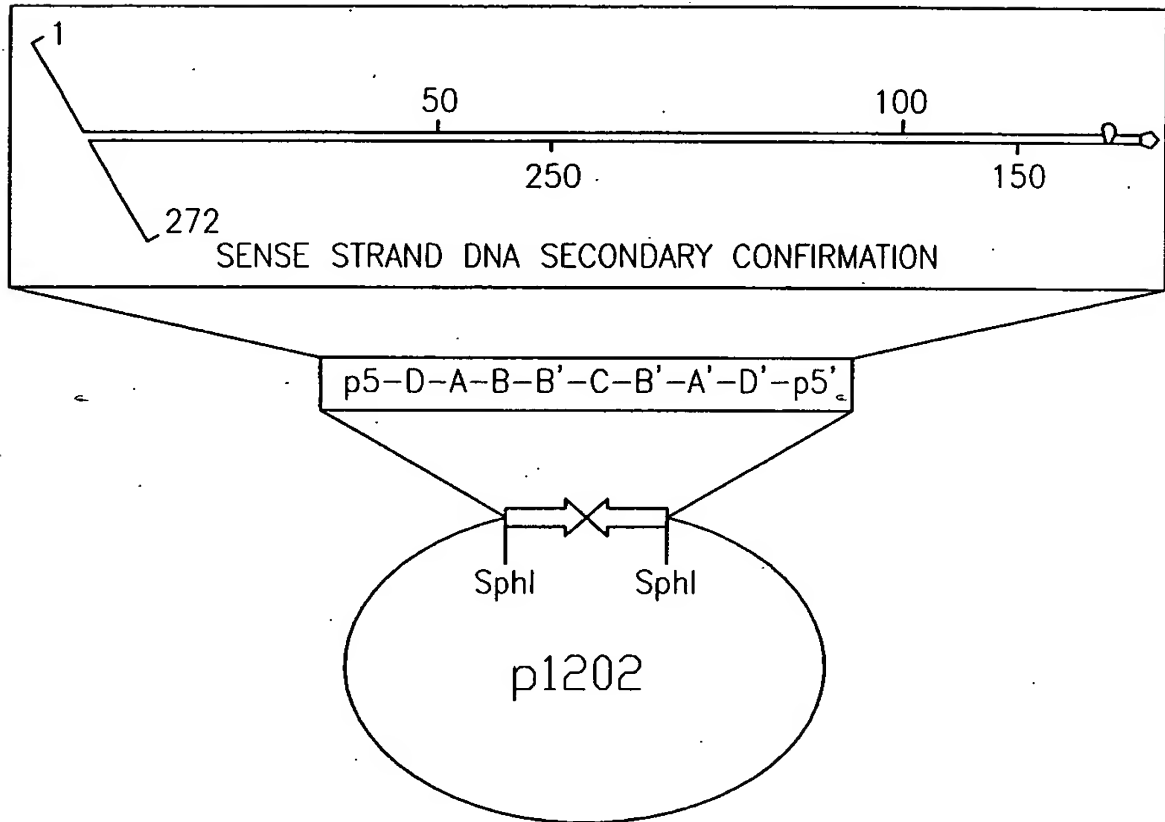


FIG. 12C

Bright Field

p81

pCisAV.GFPori



FIG. 13

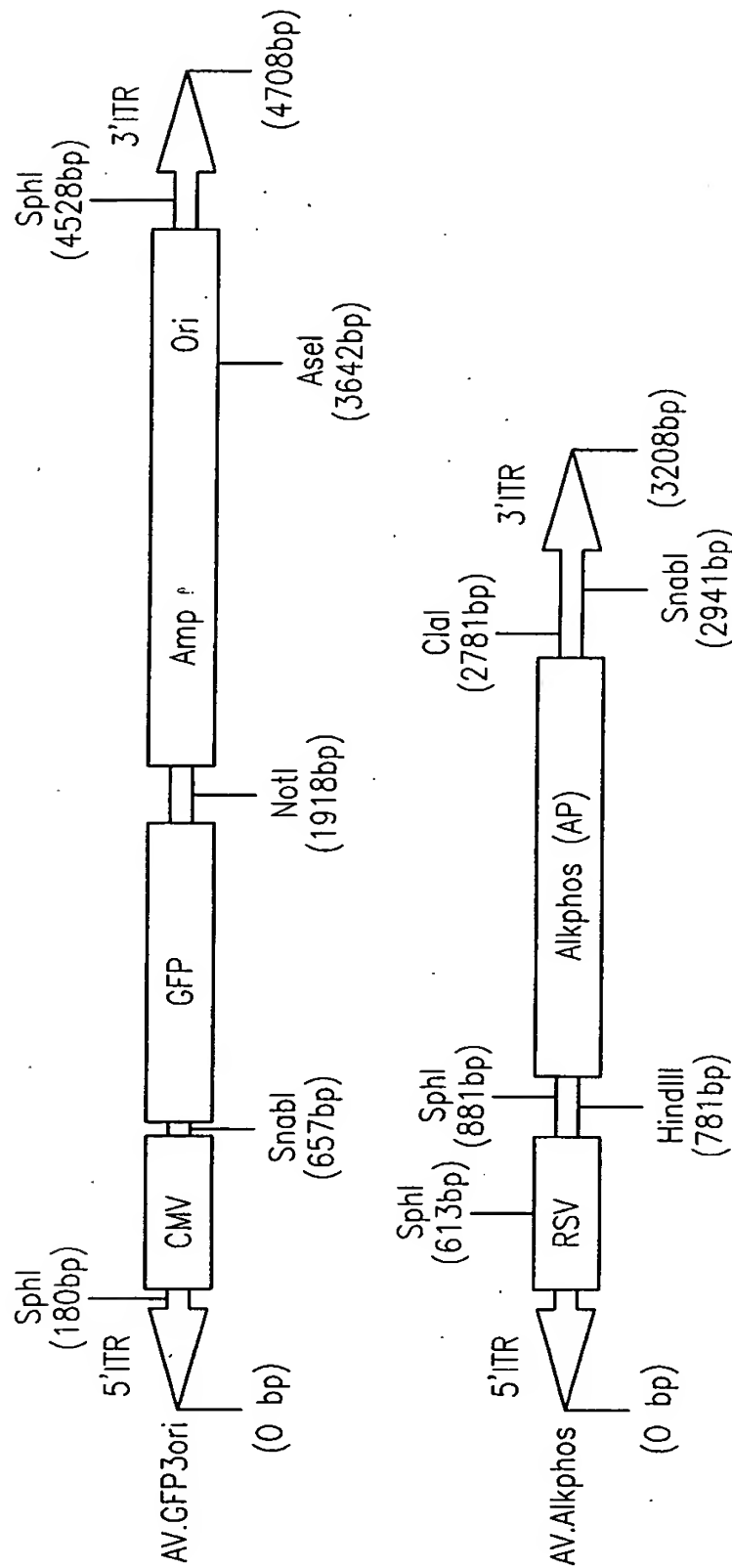


FIG. 14A

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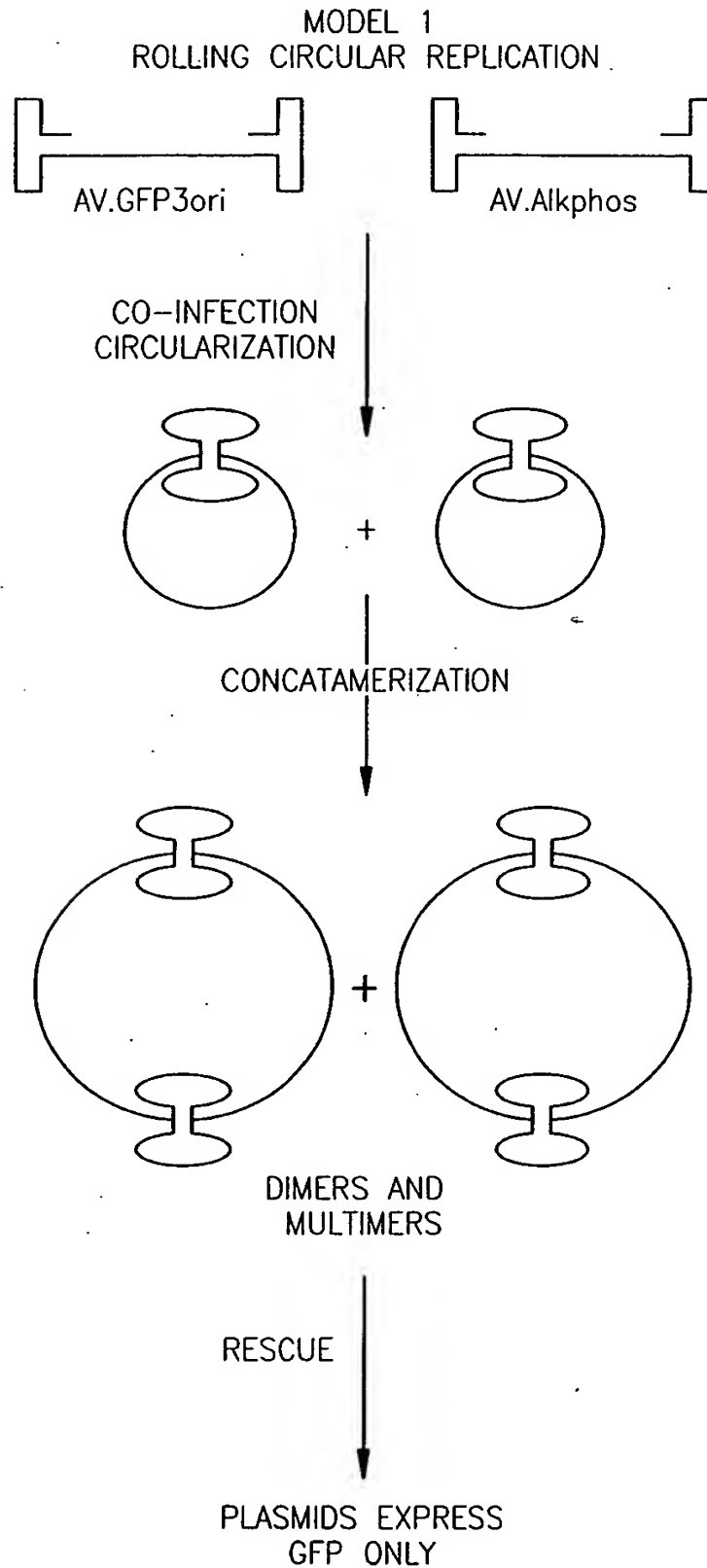


FIG. 14B

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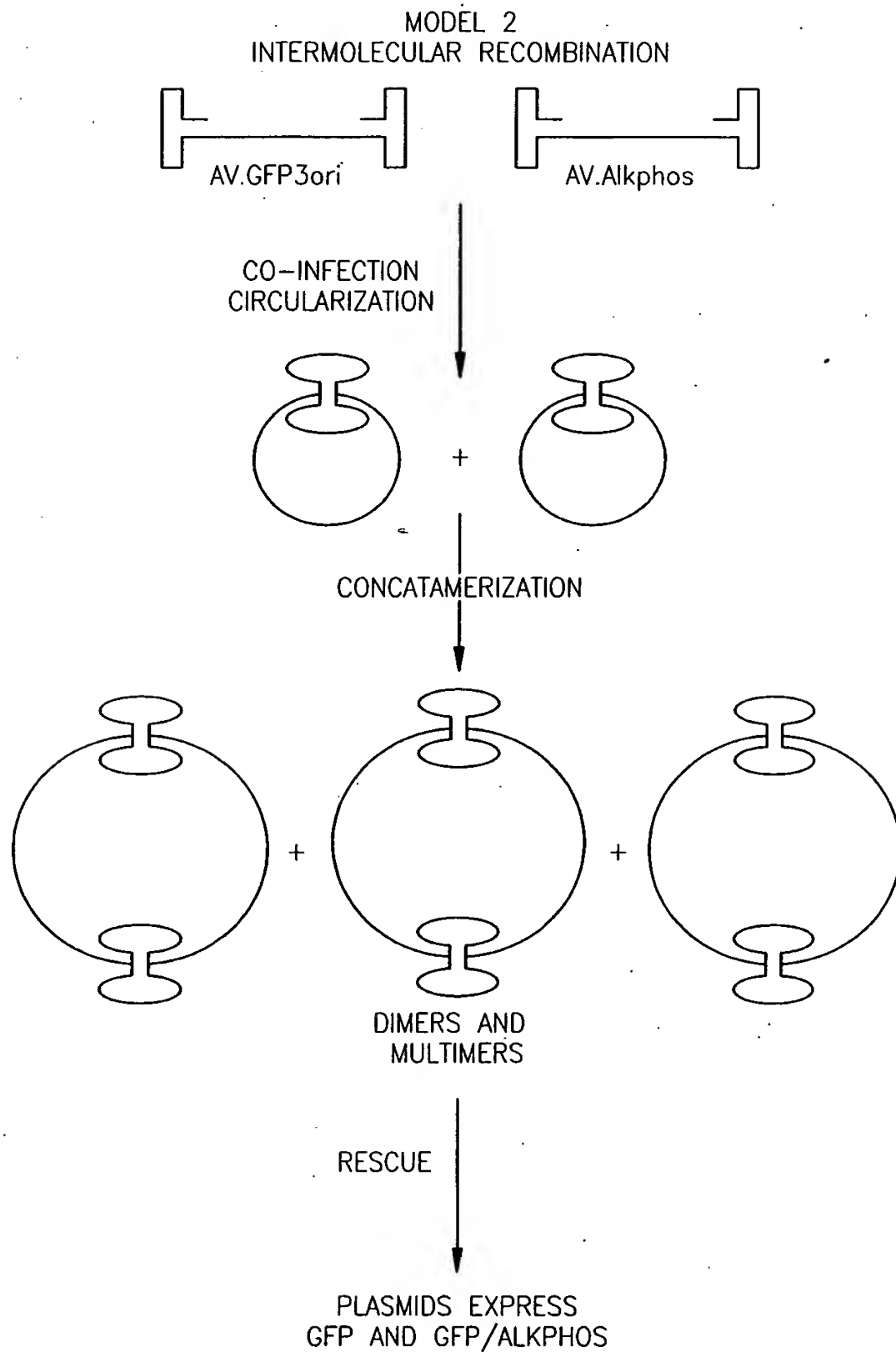


FIG. 14C

TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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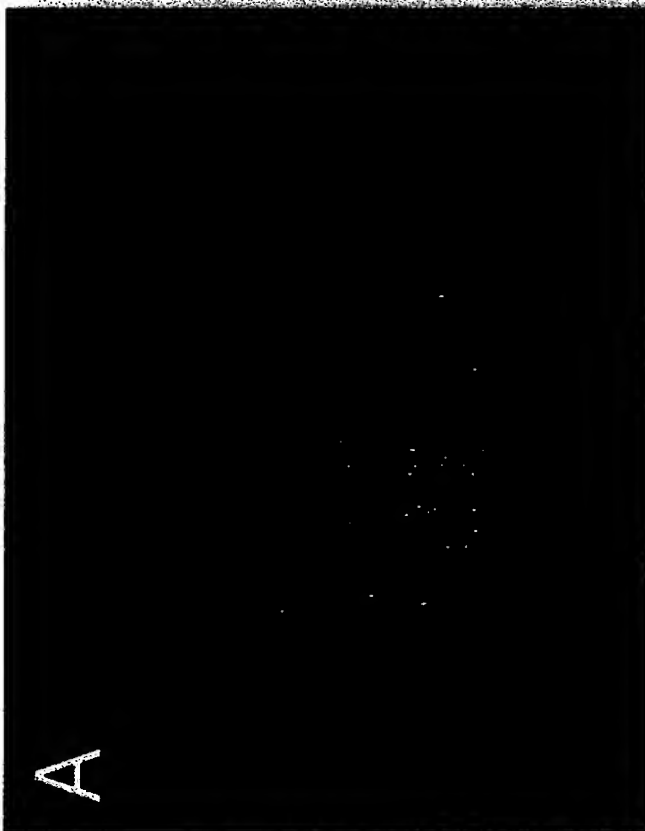


FIG. 15A

TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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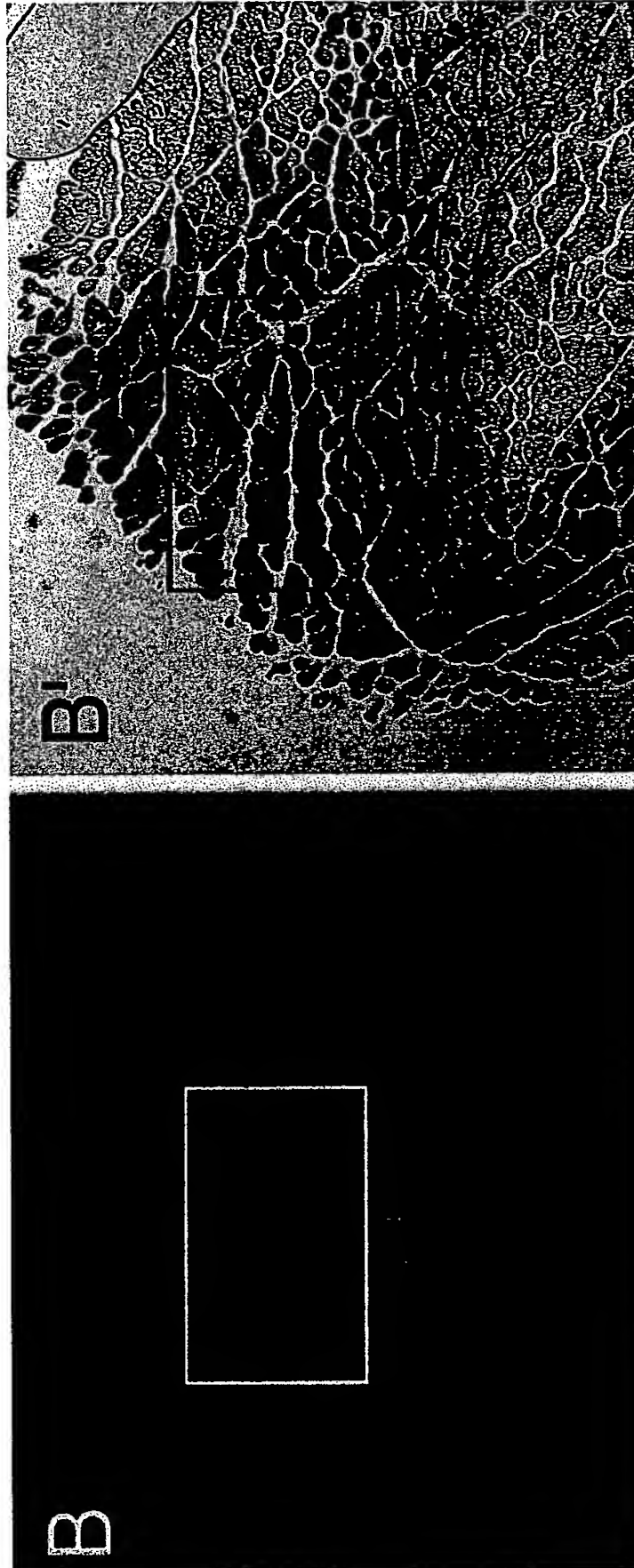


FIG. 15B

TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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FIG. 15C



TITLE: ADENO-ASSOCIATED VIRUS VECTORS
INVENTORS NAME: John F. Engelhardt et al.
SERIAL NO.: 09/276,625

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FIG. 15D

FIG. 15D

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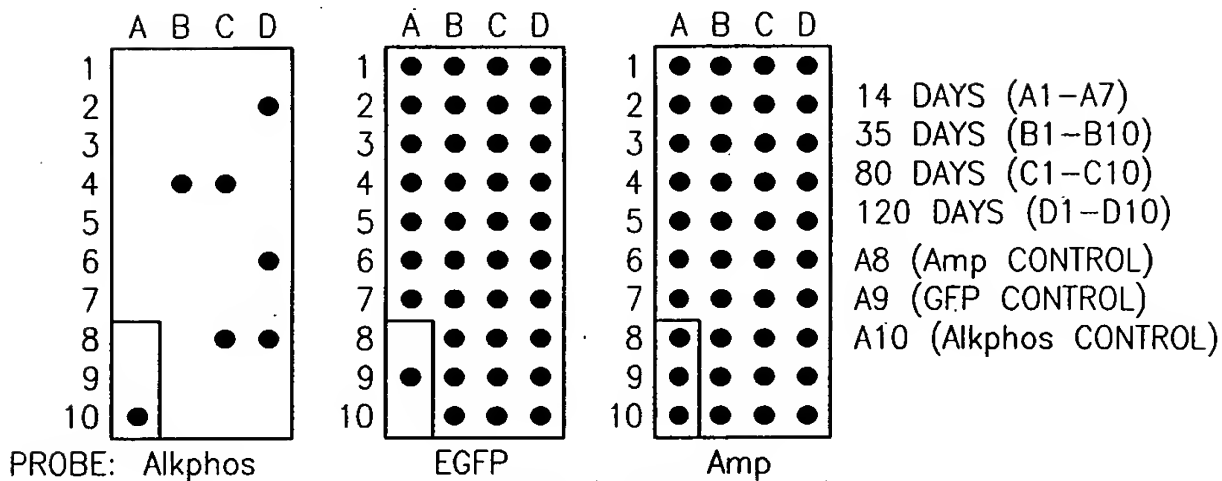


FIG. 16A

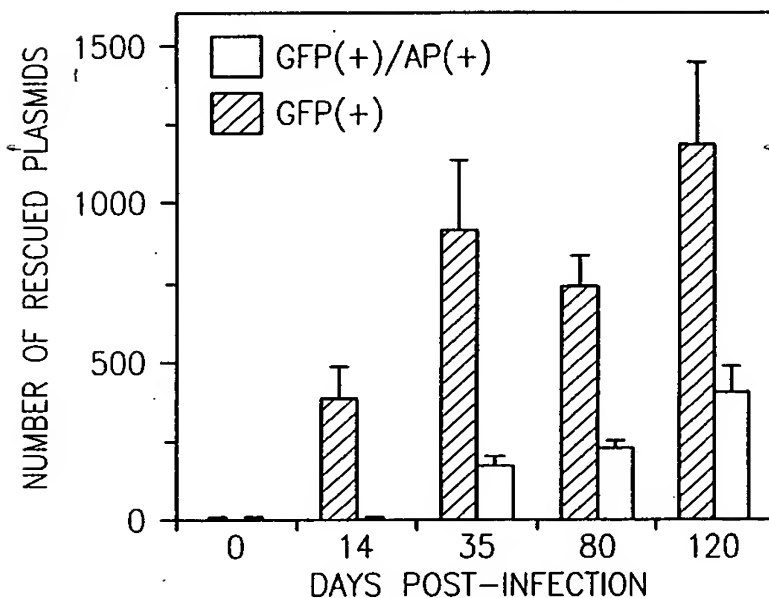


FIG. 16B

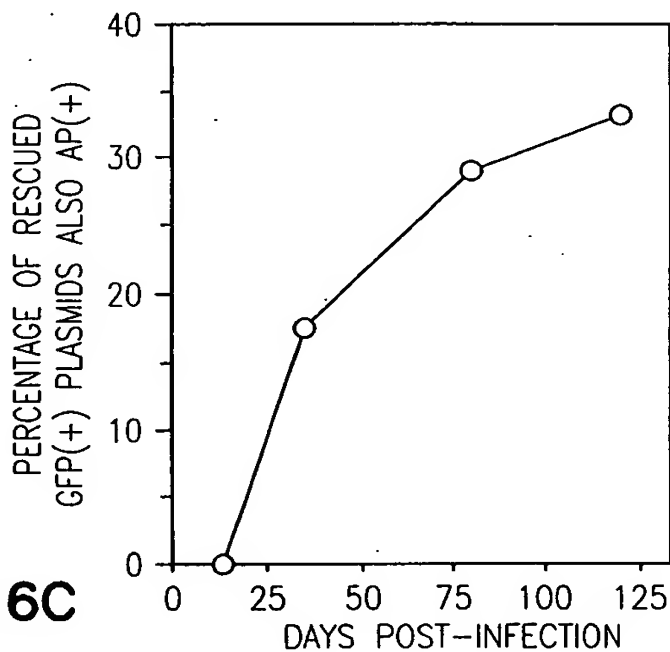


FIG. 16C

FIG. 17A



FIG. 17B



FIG. 17C



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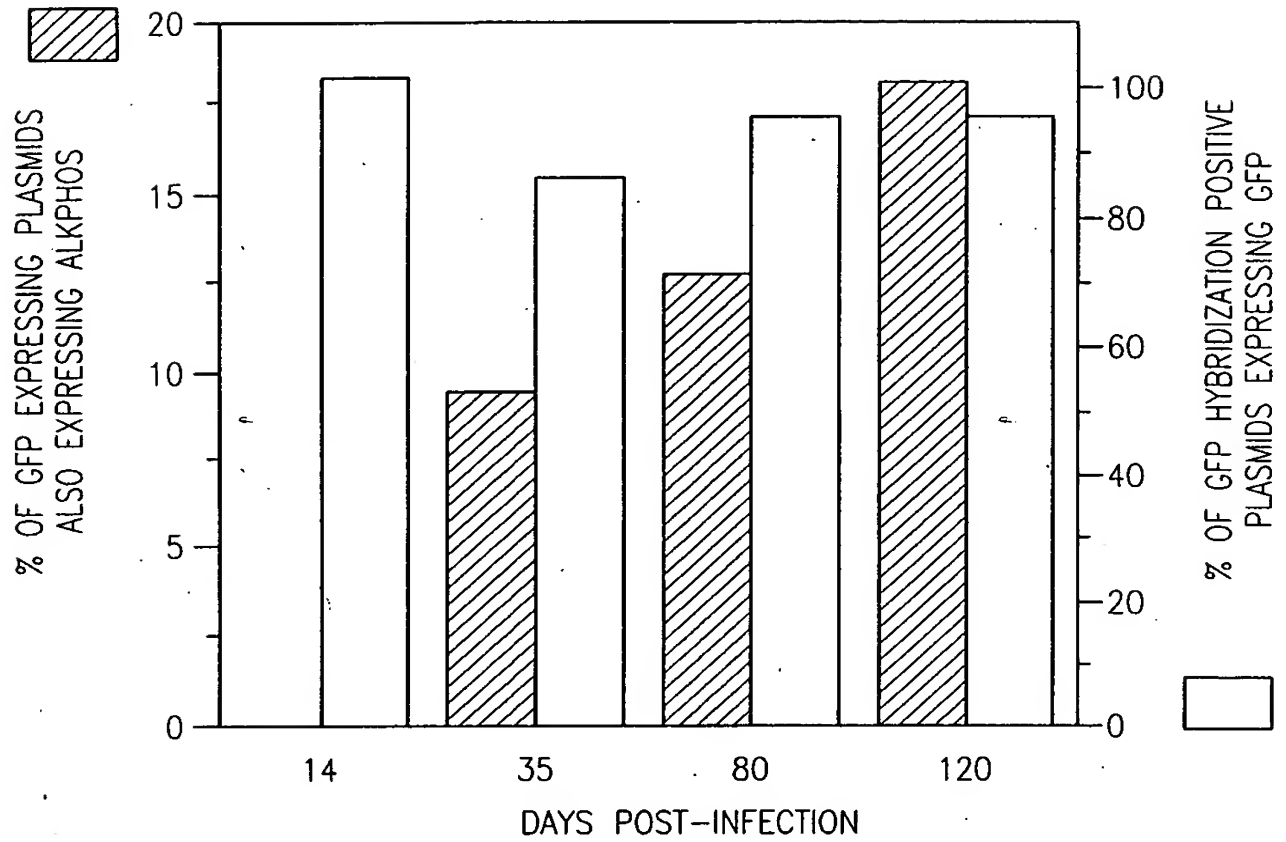


FIG. 17D

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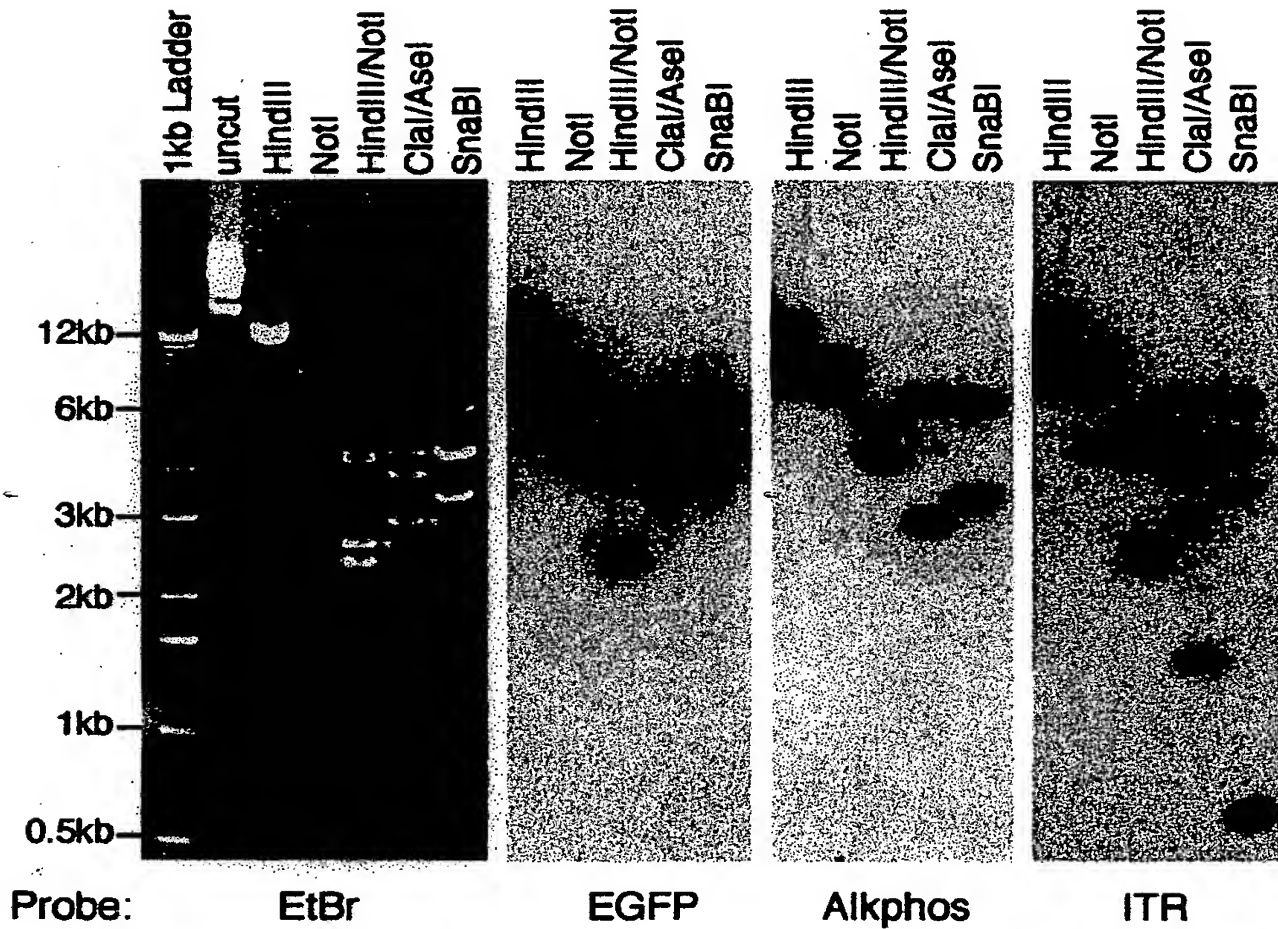


FIG. 18A

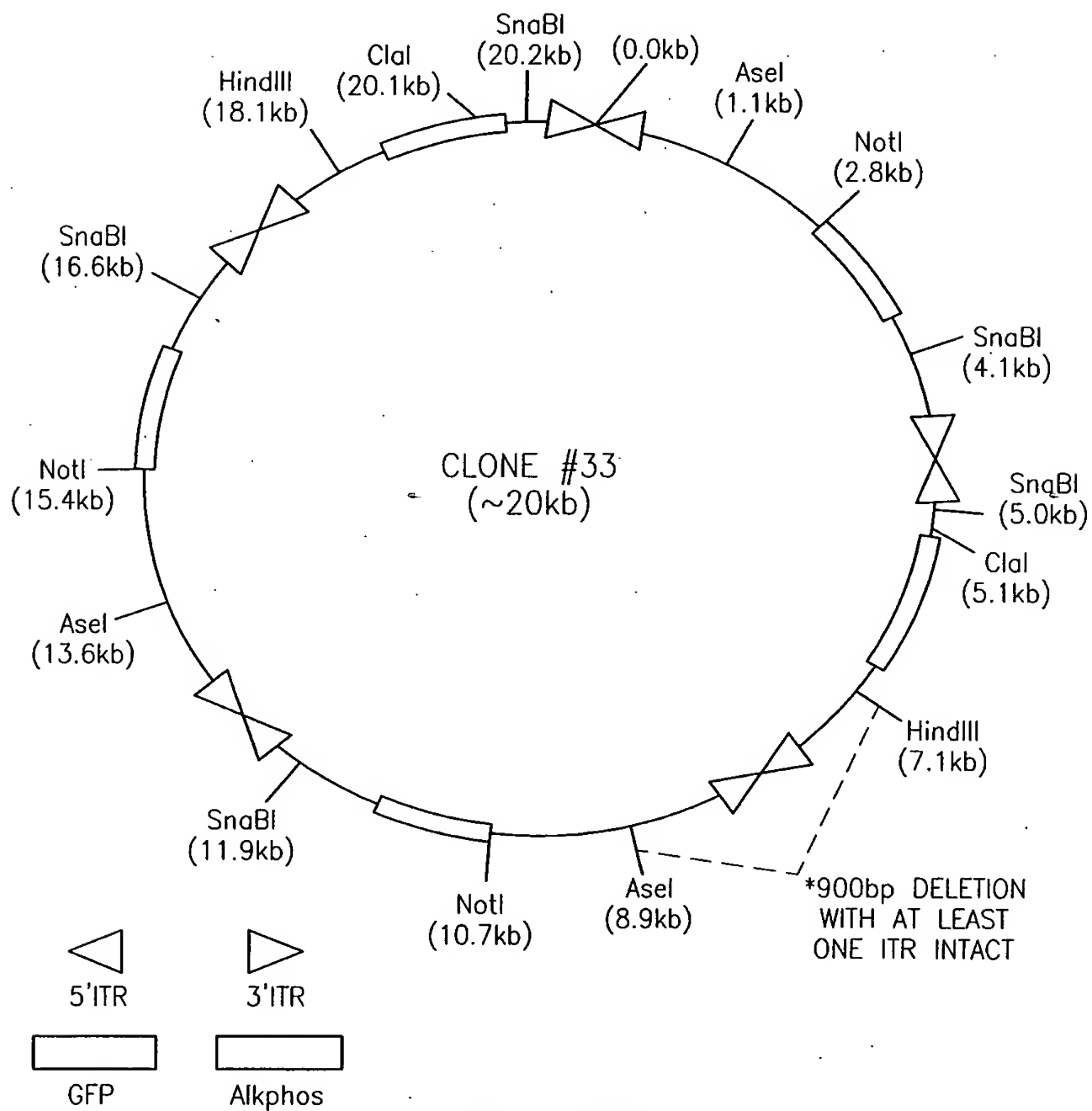


FIG. 18B

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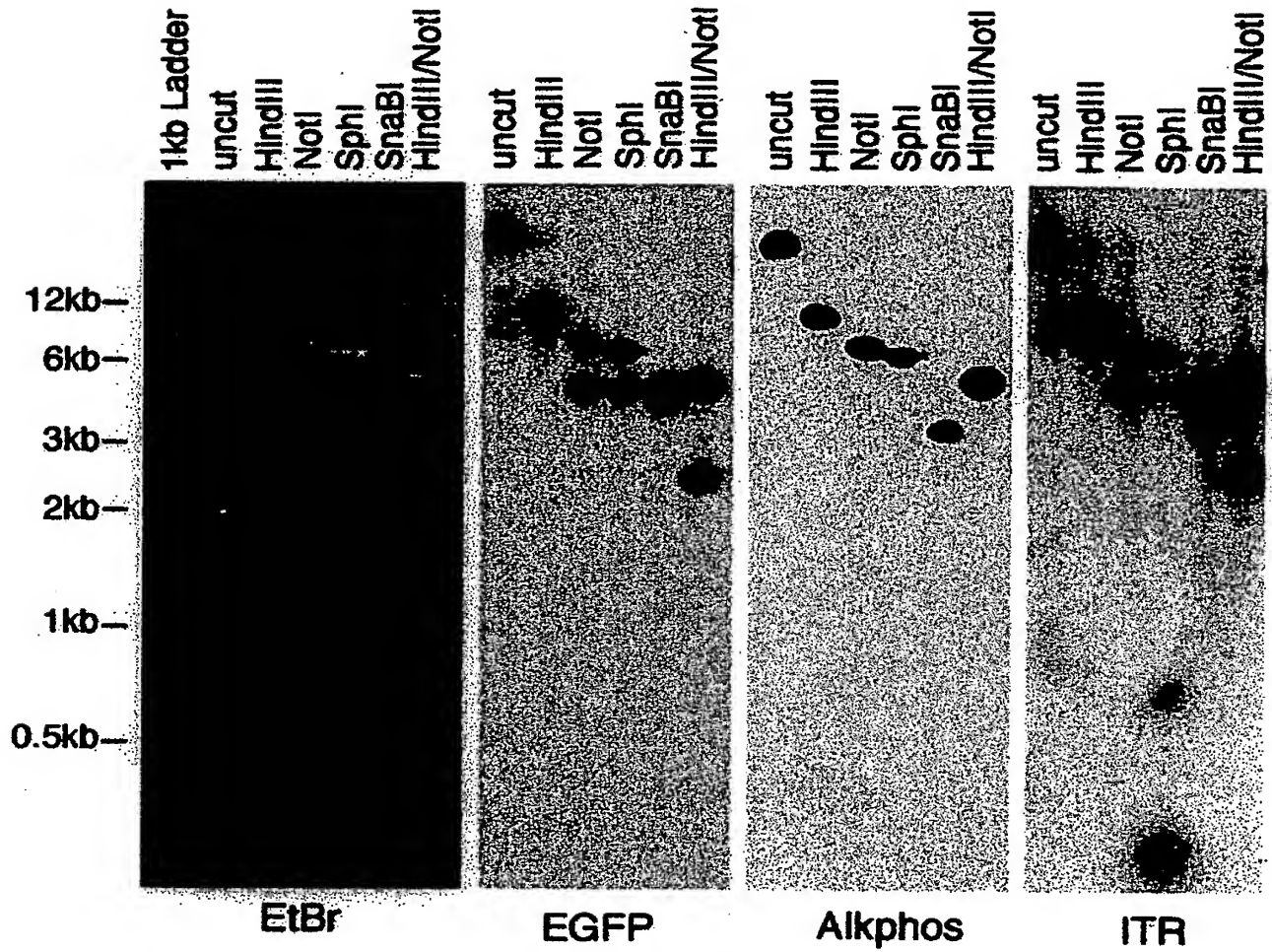


FIG. 18C

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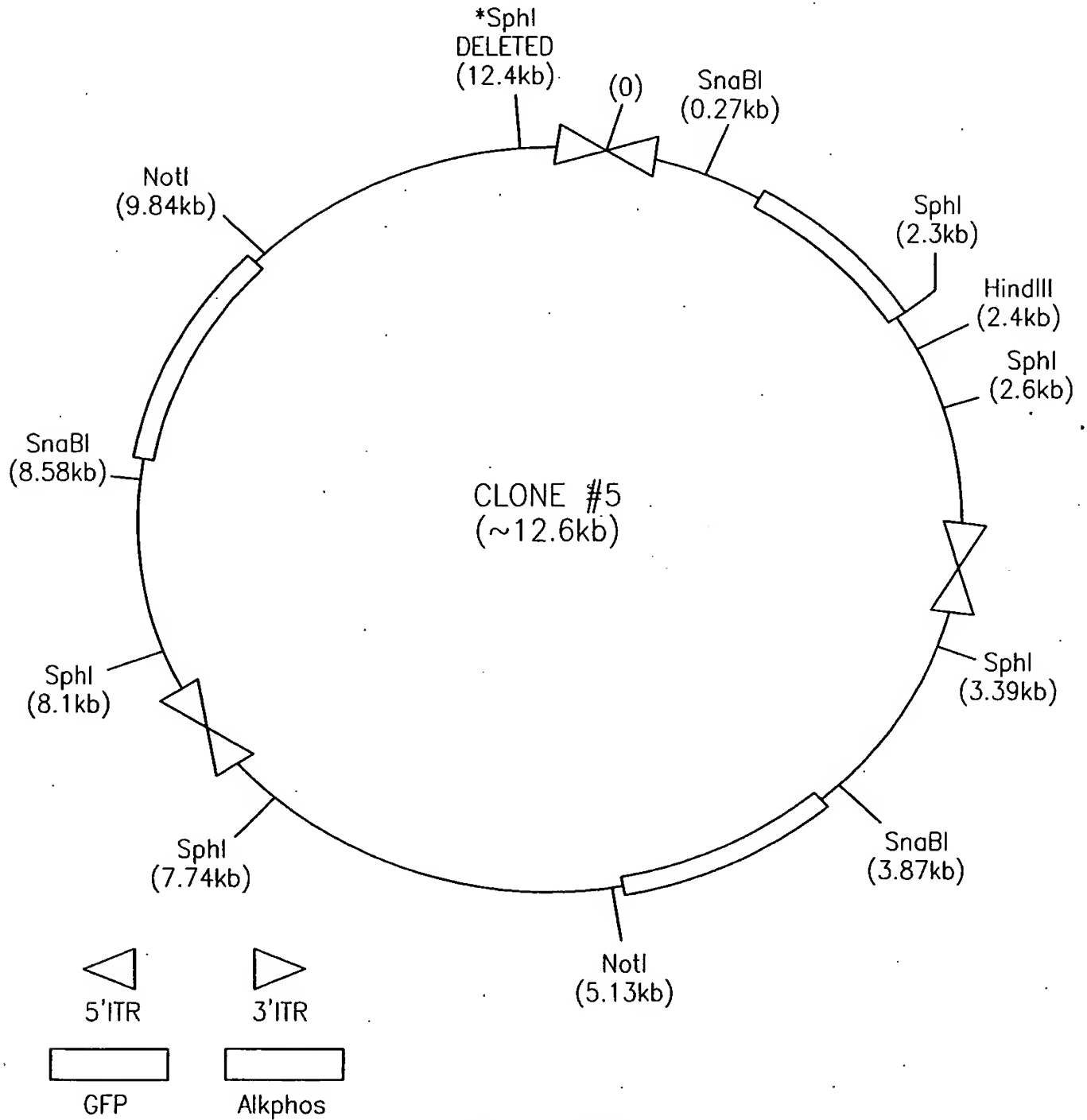


FIG. 18D

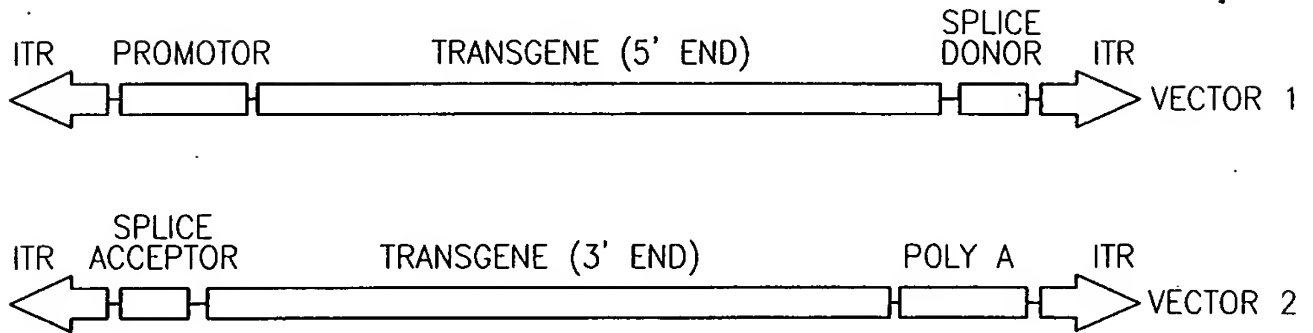


FIG. 19A

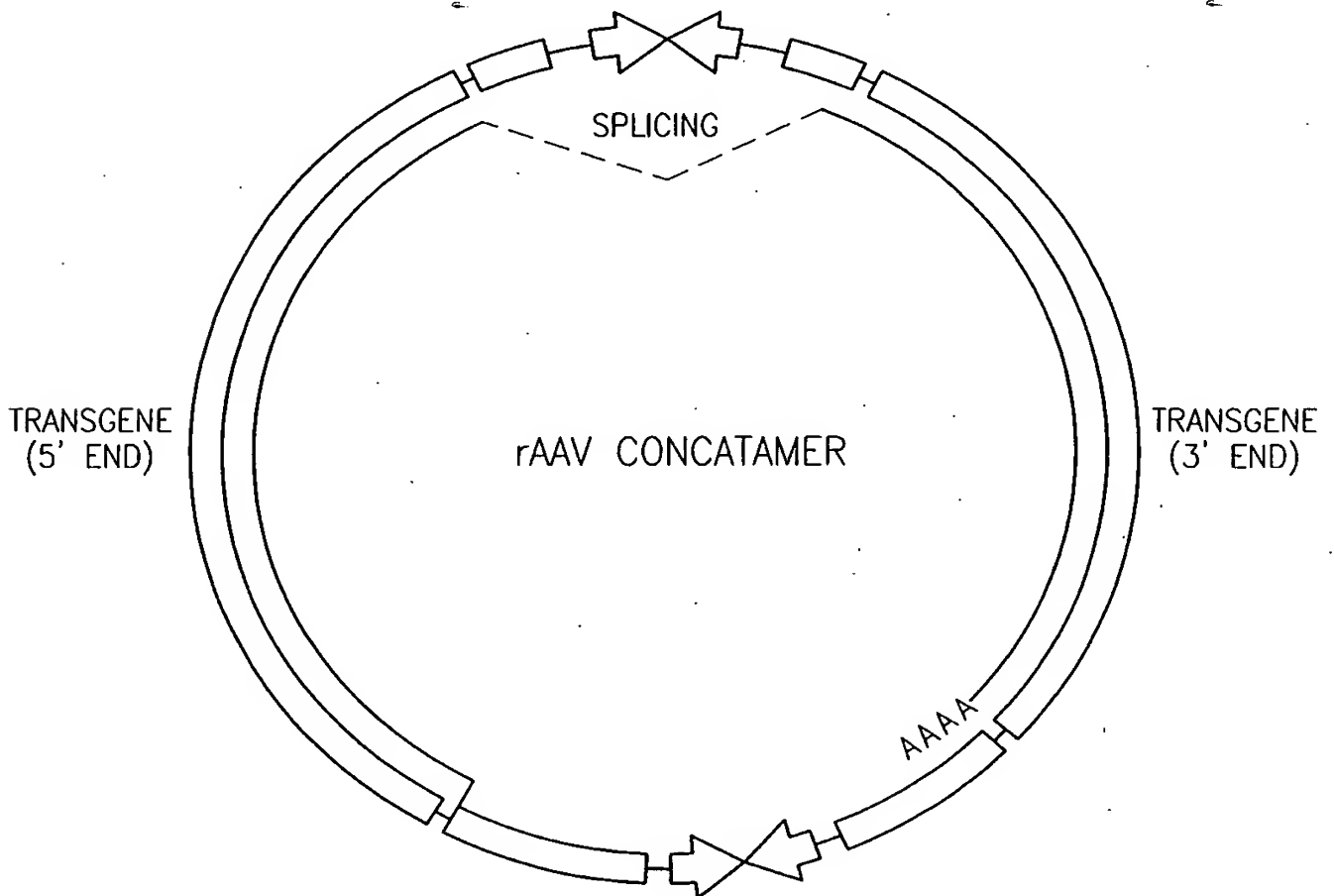


FIG. 19B